

THE Country GUIDE

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FEBRUARY 1957

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[Eva Luoma photo]

**THE Country
GUIDE**

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COVER: This month our cover subject, by Malak, illustrates one aspect of winter beauty. Snow so deep that lanes and roads are blocked is not a winter asset, but when undisturbed, in settings such as this, is both beautiful and refreshing.

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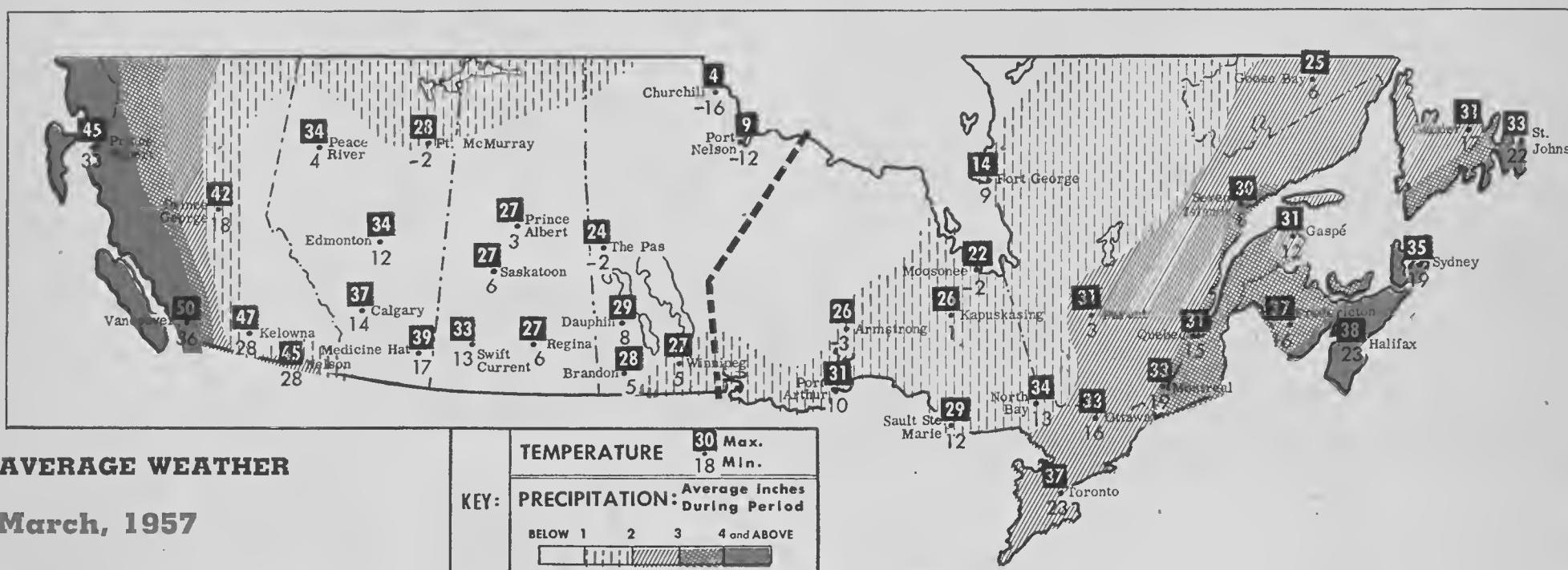
only as Paulin's can make them —

**LOOK FOR PAULIN'S CREAM SODAS . . .
FRESH AS TOMORROW - PERFECT WITH SOUP !**

Weather Forecast

Prepared by
DR. IRVING P. KRICK
and Associates

(Allow a day or two either way in using this forecast.
It should be 75 per cent right for your area, but
not necessarily for your farm.—ed.)



Alberta

Wintry weather will continue in Alberta, and the first two weeks of the month are expected to be quite cold. A brief let-up in the weather is expected around the 16th, but only to be followed by another surge of cold air around the 20th. No appreciable warming is indicated, until around the 25th, when temperatures can be expected to reach the upper 40's or low 50's throughout most of Alberta. Like last March, precipitation will be above

normal over most of this region, with the heaviest amounts occurring in the southwest section of the province this month.

With this generally cold outlook indicated, supplementary feeding in March will likely be greater than usual, as opportunity to graze stock is unlikely until toward the end of the month. Farm operations will be limited considerably, with most of the activity limited to wintry routine chores. V



Saskatchewan

Temperatures will lean on the cold side of normal through the greater part of March. The month is expected to start off cold and continue so through the first two weeks. Another cold outbreak is expected around the 20th, with the weather moderating thereafter. Warmest conditions are expected around the 26th, when temperatures in the upper 40's are likely throughout most of Saskatchewan. Precipitation-wise, the month will be

on the wet side in the southern half of the province, with slightly below normal precipitation in the northern half.

With the colder than usual weather expected to prevail over most of the month, the eventual thaw and streamflow probably will be retarded this spring. Supplementary feeding may be heavy, as pastures and ranges will be inaccessible to stock for the most part. Conditions should improve toward the end of the month. V



Manitoba

Manitoba is expected to be only slightly colder than normal. The first two weeks of the month are expected to be cold as in the other two provinces, but readings will not be as extreme. After mid-month a generally warmer trend in temperatures is anticipated, although a brief interlude of cool weather is expected to occur around the 20th, associated with the storm interval. Precipitation-wise, amounts will generally range from

light in the northern half to slightly above normal in the southern sections. Stormiest conditions are expected to be associated with the two storm intervals indicated around the middle two weeks. Fairly strong winds can be expected along with these storm systems.

Farm activity for the most part will be generally limited to the usual wintertime chores. Feeding of livestock will continue to be heavy as opportunity to forage will be limited. V



Ontario

Unlike last March, when extremely cold conditions prevailed, temperatures for the coming month are expected to average above normal. Cold air of Arctic origin will still push into the Ontario area, particularly during the first two weeks of the month, but it will be modified considerably on reaching the province. The latter half of the month will be predominately mild, although brief periods of cooler weather associated with the storm in-

ervals can be expected in the forecast area.

Much of Ontario will experience sub-normal precipitation, although in the central and southern sections, near-to above-normal amounts are anticipated. The three storm periods indicated during the month should be quite productive. Winds during these intervals will be quite strong also, particularly around the Lakes region. Relative warmth may reduce snow-cover in the latter half of the month. V



Quebec

Last March temperatures averaged considerably below normal throughout the province. In contrast, this March will be relatively mild, with temperatures averaging some two to four degrees above normal, with warmest conditions occurring around the Great Lakes region. Several periods of colder than usual weather are indicated, but much of the punch is expected to have been removed from the cold Arctic air before it

reaches this province. Toward the latter part of the month, more southerly flow is expected to predominate, and temperatures should be relatively mild.

Precipitation-wise, snowfall will closely approximate seasonal averages, with a tendency toward above-normal amounts. Storms are expected to be well spaced through the month. The southernmost sections will receive the greatest impact from the storms. Farm activity will be limited. V



Maritime Provinces

Temperatures during the first part of the month will be close to seasonal, although two periods of cooler than usual weather are indicated. For the balance of the month, as a result of more southerly flow into the area, mild temperatures will prevail. Most of the storms during the month are expected to move from a southwest-northeasterly direction, and near normal precipitation is expected to occur over this entire region. Stormy

intervals will occur with typical regularity, with perhaps the last three storms indicated on the timing bar a little more important than the one indicated around the first few days of the month.

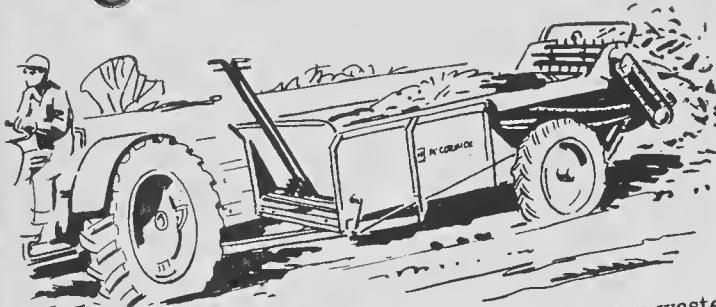
With the above-normal temperatures and some of the precipitation in the latter half of the month occurring in the form of rain, snow cover in most of New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland will diminish somewhat. V



"ALL YEAR 'ROUND

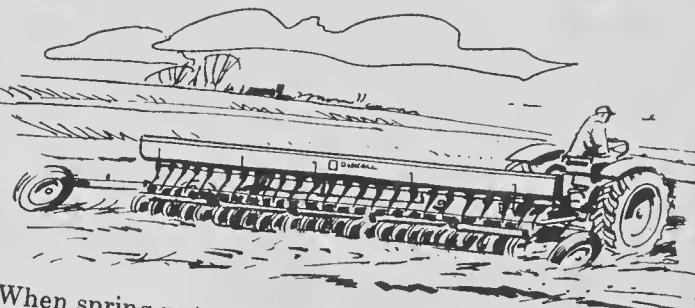
**International Harvester
helps me boost production
and cut my costs"**

1957



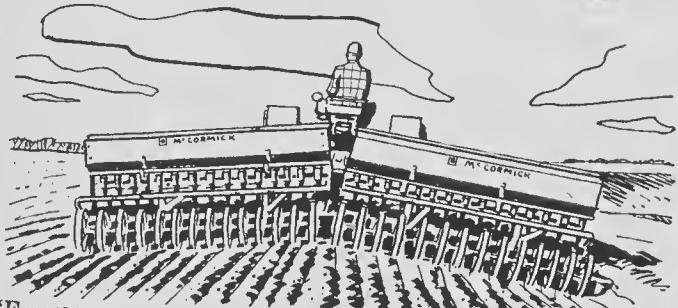
"Lots of folks who wouldn't waste a forkful of manure waste lots of time and muscle getting it on the land. With my McCormick power loader and McCormick spreader one man can easily handle a heavy manure crop efficiently."

1957



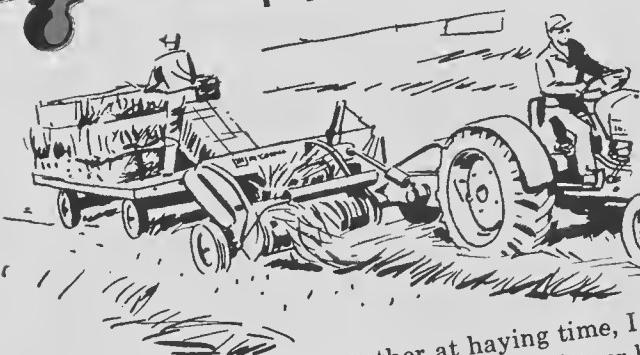
"When spring puts the pressure on there's nothing like having the right equipment ready to roll. With my IH tractor and rugged McCormick Diskall, I handle big fields in a hurry and cut tillage costs to the bone."

1957



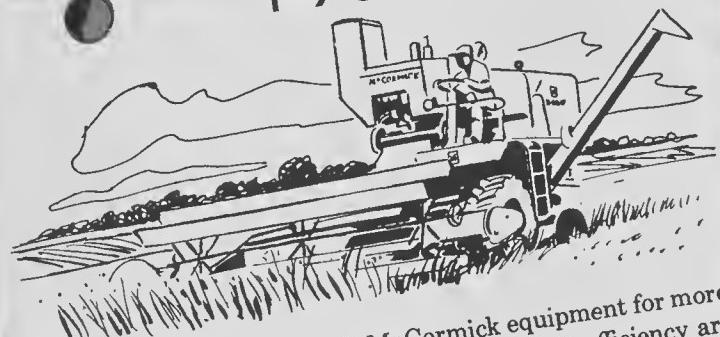
"For the most important job on the farm give me the best seed and McCormick grain drills. From the world's largest grain drill line it was easy for me to pick the big McCormick models that suited my farm exactly."

1957



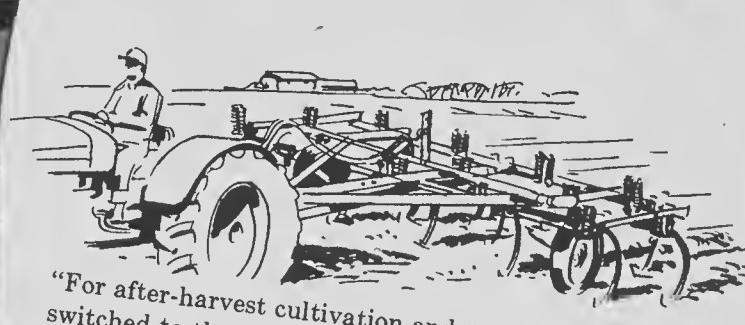
"In the race against the weather at haying time, I need the best tools to win. Mowing, raking, chopping or baling—I've proved that McCormick hay equipment is tops for cutting down work, worry and high costs."

1957



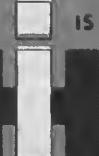
"I swath and combine with McCormick equipment for more grain and less gamble. Big capacity and high efficiency are the keys to low-cost harvesting. I know my McCormick Combine saves me the extra bushels that others lose."

1957



"For after-harvest cultivation and summer fallowing I've switched to the new McCormick No. 50 Chisel Plow. Its action holds the topsoil and cracks the hardpan. I call the No. 50 my 'conservation cultivator'."

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FARM NOTES

Court Rules

On Marketing Legislation

THE Supreme Court of Canada, on January 22, issued its findings on producer marketing boards operating under the Ontario Farm Products Marketing Act.

Findings of the Court take the form of separate opinions by the Chief Justice and seven other justices. On most questions there was considerable diversity of opinion expressed.

An important part of the judgment centers around the constitutional jurisdiction of the Parliament of Canada and provincial legislatures on the regulation of trade in products which enter export or inter-provincial trade. The Court's findings have generally upheld the application of a provincial farm products marketing act to intra-provincial trade (within provincial boundaries), but have cast considerable doubt on its application to products (such as hogs) which, either before or after processing, enter inter-provincial or export trade.

The right of a marketing agency, which is properly constituted, to make deductions of appropriate service fees appears to have been upheld, but the deduction of license fees for the purpose of operating surplus disposal programs, or for equalizing and adjusting returns to producers, seems to have been rejected.

It would seem at this stage, however, that the Court's findings will require a good deal of expert legal analysis before there can be any clear-cut appraisal of what they may mean with respect to marketing schemes now set up or contemplated. V

U.S. Farm Leader Calls for Free Market

CHARLES B. SHUMAN, president of the American Farm Bureau Federation, speaking at the organization's 38th Annual Convention in Florida in mid-December, called for action to "eliminate the authority for

the Secretary of Agriculture to buy and store a farm commodity whenever the Commodity Credit Corporation disposes of all the supplies now held of any particular commodity."

Mr. Shuman felt that farmers should move gradually away from dependence upon government action for determination of price in agriculture. In his opinion flexible price support legislation was a step in the right direction, but "this legislation remains too restrictive and should be changed to permit greater fluctuation in price. The soil bank legislation was another step in the right direction but in itself is not the answer to long-range agricultural problems. The best that we can hope from the soil bank is that it will help farmers to make needed adjustments in production and take a further step away from dependence on government."

Mr. Shuman listed the following as fundamental requirements to ensure a good future for farming in the U.S.: freedom to change; a free market for farm products; opportunity to accumulate capital and own property; a good educational system; the extension of competitive pricing into all areas of economic activity; and, an aggressive and broad program to expand markets for farm products, both at home and abroad. V

Artificial Insemination Increases

ARTIFICIAL insemination of cattle in Canada, according to the Canada Department of Agriculture, increased in all provinces except Manitoba, in 1955. At the prevailing rate of increase in 1956 over half-a-million cows were bred artificially during that year.

One of the limiting factors in studying the effectiveness of AI for the improvement of livestock is the small number of production records available on the progeny of the sires used in AI units. Reports indicate that only about ten per cent of the herds serviced artificially are enrolled in any milk testing and recording program. V



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J. E. Brubaker (left) of Beamsville, Ontario, and J. C. Kitching (right) of Carman, Manitoba, have been awarded the 1957 Nuffield Foundation Travelling Scholarships for six months study of agriculture in the United Kingdom. These scholarships, which are intended for mature young men who have farmed on their own for a number of years, are for the purpose of fostering a better understanding in Canada of British agriculture and British people. The winners are selected each year by a Canadian Federation of Agriculture committee, from among applications submitted annually by member bodies of the Federation.



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The C.F.A. Comes of Age

Dr. H. H. Hannam, who is the president of the Canadian Federation of Agriculture.



THE Canadian Federation of Agriculture has now come of age. It celebrated its 21st birthday last month in Winnipeg, where its 21st Annual Meeting was held, January 21-25.

It was appropriate on that occasion, and also gratifying to the assembled delegates, that The Rt. Hon. James G. Gardiner, Minister of Agriculture, who has held office in the Federal Government for almost exactly the lifetime of the Federation, felt able to offer the following tribute:

"The Federation, to my mind, is giving more effective service to farmers than any other national organization we have had. The very nature of the organization invites loyalty from each farm group. The financial strength of the organization does not depend entirely upon individual membership. Its annual meeting has served as a forum, where governments can read the intentions and wishes of the farmers, no matter what branch of agriculture they are pursuing. It is a pleasure to come here and meet with you."

It was also appropriate that the president, Dr. H. H. Hannam, who is managing-director of the Federation as well, should deal somewhat with organization. The Minister had reviewed the history of farm organization in Canada from the formation of the Dominion Grange in 1872, to the present time. And Dr. Hannam, after dealing with the farm outlook, which has been pretty generally discussed since the Federal-Provincial Agricultural Conference in December, recalled the formation of the Federation in 1935, at which time, he said:

"Distress which stalked the countryside, prompted farmers to place the desire for unity uppermost; and it was agreed that all organizations which were bona fide farmers—whether organized as direct membership organizations, as co-operatives, or as commodity, or rural organizations—should be welcomed into the Federation. This vision of one united voice for organized Canadian agriculture quickly spread, caught the imagination of farm people from coast to coast, and in a relatively few years, saw the farmer organized and speaking for all provinces and all branches of agriculture.

"Before many years had elapsed, the Federation became accepted, both at home and abroad, as the authoritative voice of organized Canadian agriculture. For years now, the C.F.A.'s views and activi-

ties have been top news. Its policy decisions are sought by all governments in Canada, and by other national groups; its presentations before cabinets, parliamentary committees, national boards, royal commissions, in fact everywhere that farm policy is being formulated or developed, are welcomed and respected."

REFERENCE to the nature of the Federation was no doubt prompted by two considerations. First, the Federation Board had, at its summer Annual Meeting last summer, set up a special committee to deal with questions of organization and programming; and second, the fact that a proposal had been received from James Patterson, chairman of the Inter-provincial Farm Union Council, who, on behalf of the I.F.U.C. proposed an amalgamation of the two organizations, under conditions which would require a new constitution, a new charter, and a new name for the amalgamated organization.

The Committee of the Federation was not able to report any substantial progress by the time of the Annual Meeting, but in respect to the I.F.U.C. proposal, the Federation approved the following resolution:

"Whereas it is the opinion of this gathering that every effort should be made to promote unity of opinion among the farmers of Canada,

"Be it resolved that, viewing it as a move toward better unification in the farm movement, the proposal from the Inter-provincial Farm Union Council be referred to the executive committee of the Canadian Federation of Agriculture; and that power to negotiate with the I.F.U.C. be given to the Executive of the C.F.A., or to a committee which it may appoint, to see if any plan may be evolved which would lead to greater unification of the efforts of the Farm Movement of Canada: such plan, if developed, to be referred for consideration to member bodies of the C.F.A., it being understood that negotiations for unifying our forces must take place also at the provincial level."

On the subject of organization, with which Dr. Hannam dealt at some length, he made this comment in the course of his remarks, that is worthy of note:

"We did adopt a federation type of organization for the C.F.A., because of the great variety of farm organizations then in existence; because of the complexity of organized agriculture in this country covering half a continent; and because we tried to adopt realistically the particular type of organization that would be most suitable for our needs and most effective under all conditions.

"Having in mind the widespread support which the farmers of Canada have given to the C.F.A., the remarkable record of accomplishment to its credit, and the manner in which it conscientiously strives to serve, and does serve, farm people today, it will not be surprising if Federation officials at both provincial and national levels will, before adopting the changes proposed, wish to be sure that such changes can be expected to improve its functioning in the service of its people, and give assurance of greater strength and unity than it now enjoys. They will feel that their election to office makes this a responsibility they owe to their people."

THE National Farm Policy Committee, formed in July 1953, completed its work in July 1956. Its recommendations, after approval by the Board of Directors, have been printed as follows: Marketing and Price Supports; International Trade and Surplus Disposal; Farm Credit; and Radio and Television. Other policy statements received and approved by the Board, and mimeographed, are those dealing with the following subjects: Immigration; Agricultural Co-operation; Agricultural Education, Extension and Research; Agricultural Marketing Legislation (Model Act).

One of the highlights of the meeting was the address at the luncheon tendered the delegates by the Government of Manitoba, which was given by Dr. J. J. Deutsch, head of the Department of Economics and Political Science at the University of British Columbia. Few delegates who followed Dr. Deutsch's carefully prepared and well-organized paper can have (Please turn to page 78)





He Wanted To Drive a Snow Plow

The road patrol operator does a fine job under difficult conditions with his motor grader, which usually has a snow plow and a wing mounted on it.

AMONG all of the responsibilities of municipal governments there is no task that has more uncertainty about it, than that of snow removal from the roads. One day they are open, and within hours completely closed, by one of our windy, winter visitations. Our modern mode of travel and the consolidation of schools makes it imperative to keep traffic moving.

The equipment used in snow removal usually consists of two basic machines. One is the well-known motor; or self-propelled, maintainer, with a snow plow mounted in front, while, attached to the side, is a 14-foot wing to push the snow farther into the ditch. If desired, the operator can swing the maintainer blade into working position, and by so doing, leave an extra smooth job behind him. The other unit used is the crawler type tractor, with dozer blade. This unit is only used when roads get badly blocked.

In the operation of these units there is a small group of unsung heroes, the patrol operators and cat skinners. As a councillor for division one, County of Ponoka, Alberta, I wanted to become better acquainted with the trials and tribulations of a patrol operator. So, after a bad snow and blow, I spent a 32-hour stint on a patrol, both as passenger and as operator of the machine, with only a five-hour break. I would strongly prescribe the experience for both councillor and taxpayer—it greatly enhances one's appreciation of the service rendered by these men. As a councillor you would have to do it without thought of remuneration, as payment for such county or municipal work is quite illegal for a councillor. The knowledge gained though, is satisfactory reward for the effort given.

The type of patrol our county uses, complete with snow plow, blade and wing, is a 17-ton, mechanical behemoth. The operator sits in a cab five feet up in the air, and steers with a steering wheel that fights back at one like a long-horn steer. The blade, plow, and wing, and the tilt of front wheels are controlled by a set of six levers, mounted within easy reach. Those levers are vindictive little devils. Each has a temperament of its

How a mechanical monster in a snowdrift in 15-below weather on a dark night, can mix up the opportunities and responsibilities of a municipal councillor, is told in this article

by CLINTON C. REED

own; and if not treated with the respect they demand, they take their revenge. There are two gear-shift levers, the standard three-speed forward, and one reverse, and high- and low-range lever. Sorry is the operator who fails to learn the proper technique of shifting this lever. If the shift is slow, the pesky thing proceeds to pound the palm of your hand like a trip-hammer. To make a proper shift with this lever is one thing to be learned very quickly. You have to.

IN my division, there had been a period of almost steady wind for three weeks, with the result that an extra operator had to be hired to give the regular man, Don McLaren, some rest. The new man, Stan Pugh, was covering a section of roads that he did not know, so I went along to show him bus routes and the boundaries of the

divisions; also to spell him at the wheel.

It was one of those mild March days when the temperature will rise to 20 above by noon, but drop to as much below by midnight.

All went well for ten miles or so, when I had to pull to the side of the road to let a school bus pass. I got too close to the edge and ditched the machine in about four feet of snow. We got out and dug all the snow away from the patrol—they're only about 25 feet long—but it couldn't quite make it, and we had to get a bit of a pull from the bus.

By now it was sundown, so we plowed roads up to Art Perry's where we knew the hospitality abounded and we would be invited in for supper. We weren't disappointed.

After supper we headed east through heavy snow for two-and-a-half miles,

[Photographs courtesy Powell Equipment Co. Ltd.]

then came to a stretch that proved to be piled full, with drifts up to five feet deep.

There is quite a trick to pushing a passage through deep drifts with one of these machines. After first hitting the bank you press the clutch, put the hi-low range lever in high range. (if not already there), the gear shift in reverse. Then engage the clutch, grab for the lever that raises the plow and raise it off the ground. Back up 100 feet or so, press the clutch again, grab the brake and bring the machine to a quick stop. Bring the hi-low lever back into low range, release the brake, put the gear shift into a forward gear, raise the clutch, gain speed, press clutch down, put the hi-low lever into high range, raise clutch, grasp the control lever and lower plow, all the time steering first with one hand then with the other. Remember, this brute weighs 17 tons. Hit the snowbank, gain a foot or two, maybe five feet, and then repeat the whole process, all of this taking place in a matter of two or three minutes. Keep that up for a couple of hours or so, and you don't have to ask someone if you have been busy. You know it.

(Please turn to page 73)

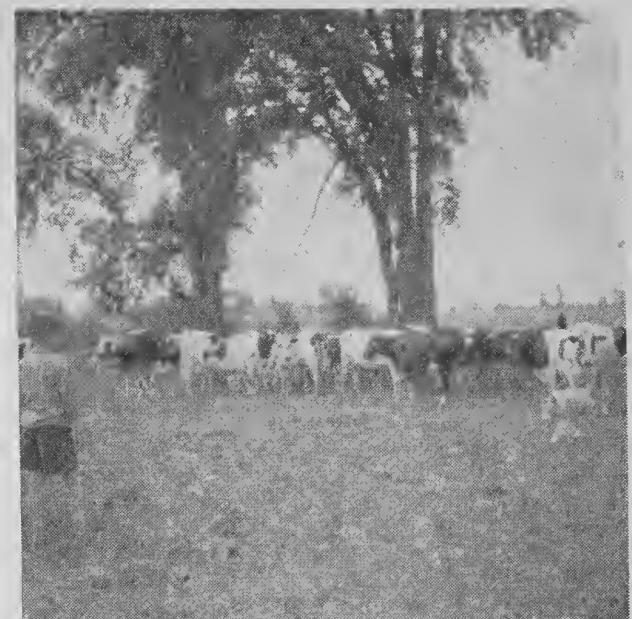


There is quite a trick to pushing a passage through deep drifts. Often it is a case of gaining a foot or two at a time, and repeating the process sometimes for hours. A cup of coffee at a neighboring farm is always very welcome.

LOOK, DAD! NO HANDS!

One or two men using bulk tanks and pipeline milkers can look after sizable herds, but cleanliness is the key to success

by DON BARON



[Guide photos
Howard Robinson of Pembroke, who milks 50 cows, saves a lot of time by using a pipeline system.

POPULARITY of the old and faithful milk can may be on the wane, but the sudden interest of dairy farmers in bulk tanks is bringing with it another development.

As fast as farmers in fluid milk areas install their tanks (1,000 have been sold in Ontario so far), they are finding it's a lot of work to carry milk from stable to cooler. That's why pipeline installations which carry milk from cow to cooler and can be cleaned without being taken apart, are gaining in popularity. Dairy Commissioner Everett Biggs reports that nearly 20 were installed up to the end of 1956.

The Country Guide visited several such installations and here is what we found:

Breslau, Ont., dairyman George Cardinal built his pipeline milker as part of a loose-housing-milk-

ing-parlor system. He designed the combination dairy and milking parlor as a single building. That kept down expenses, reduced the length of pipe required, and made sanitation easier.

He arranged it so that windows on all sides can be opened for fast ventilation. Hot and cold water are close at hand for washing cows, or equipment. Bacteria count of his milk has been kept down under 10,000—good in any man's books.

The system means that he can handle a 50-cow herd on his 250-acre farm. Helped by his wife, he can prepare and milk the herd, clean up afterwards, and do it all in less than two hours, night and morning. And he can do it without a regular hired man.

With that size of herd, and a fluid milk contract, he has built up a sizable income. He has also maintained his "family farm" status, which is the aim of most farmers these days.

COVS enter the preparation stall from outside at milking time, where they are washed. They then go to one of the four milking stalls.

Milk is not measured as it comes from the cow. "Separate weigh tanks are available for pipelines," Mr. Cardinal explained, "but they must be dismantled and washed by hand. I am aiming at a lot of milk with a minimum of labor."

With his installation, milk goes from cow, through rubber hose, to the stainless steel pipe overhead, leading directly to the bulk tank. There it is discharged into the releaser tank (which permits the vacuum to be maintained in the pipeline), and is dumped into the bulk tank below.

There are no waste moves with that kind of system, but equipment must be washed carefully.

Detergents and disinfectants are washed through the pipes, under force of the vacuum, immediately after each milking. The bulk tank is washed out by hand every two days, when emptied by the milk truck.

That speeds up chore-time. But to combine it with an all-round streamlined dairy set-up, he geared the entire dairy operation to "high volume and low cost."

The cows winter in an open-front pole barn. Hay is stored in the yard under cover, and is fed from mangers around it. Cows are self-fed corn silage from a horizontal silo. The entire barnyard has been concreted, including a concrete ramp, so manure can be scraped up over it into the manure spreader waiting below.

JOHN SMITH at Woodbridge, Ontario, was faced with different requirements altogether.

He had a stanchion barn, with ties for 30 cows, that could be expanded by adding a few more stalls. It was too good to tear down, but he wanted to take some of the labor and backache out of chores. A pipeline milker was his answer.

Finances weren't a major problem for this dairy farmer. His land borders a main highway just north of Toronto, and he sold frontage for a modern motel.

His pipeline milker runs the entire circuit from dairy, to stable, and along its whole length of 90

feet, and back again to the bulk tank. Now, milking heads are attached to the pipeline at a stop-cock located at each cow. Milk goes directly from teat-cup, to pipeline, along to the dairy, and into the releaser tank, where the vacuum is broken. From there, a separate electric pump pushes it over to the bulk tank.

"Without this system, I would be killing myself here," Mr. Smith told us.

"Now I can milk the cows alone in an hour and a half, including the 20 minutes needed to set up the equipment. That's why I don't have to keep a hired man."

Since his pipeline is so long, it was costly. He equipped it with an automatic washer, too, which saves an hour or so of his time each day.

Right after milking, he sets it. Then, while he is having breakfast, or supper, it automatically sends a rinse surging through the system, followed by a detergent, and finally a chlorine disinfectant. Without this, he would be forced to stay in the barn during wash-up.

As with any good pipeline system that is carefully washed each day, he never takes it apart.

"Sure it costs plenty to install," he admits. "It may require over a dollar's worth of chemicals a day just to keep it clean. But look at the job it does for me." He wouldn't go back to dairying without it.

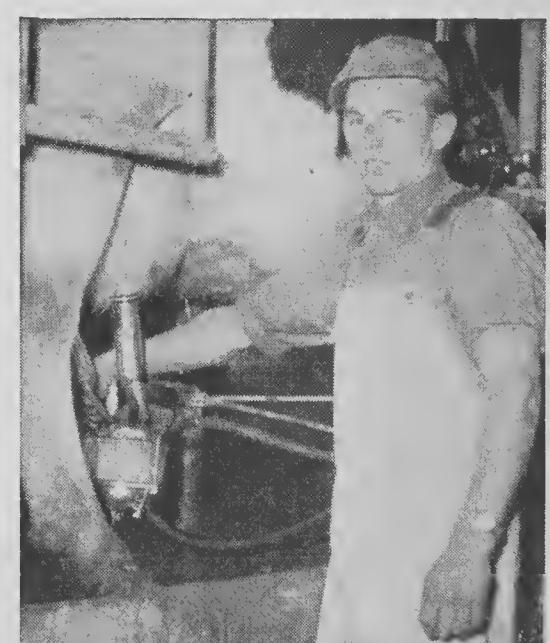
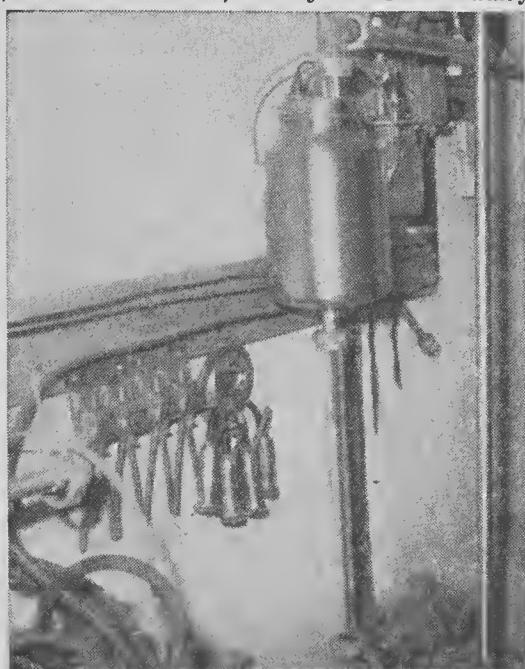
GRANT EBY, at Bloomingdale, is another convert to pipeline milkers. He was a dairyman until ten years ago, when his barn burned down. He swung over to beef cattle then. But these have been lean years for beef producers on high-priced acres like his own, so in 1956 he turned back to dairying.

There was no question in his mind what kind of set-up he would install either. "Loose-housing, parlor-milking, a pipeline, (Please turn to page 45)



George Cardinal has a compact and well organized milking unit in one building.

The positive action pump and tank which form the heart of the John Smith dairy.



On the Grant Eby farm, Bloomingdale, Ont., Hans Harnus connects a cow to the pipeline.

Still Flows the River

THE years are long, but not too long to remember how I came as a child to our home on the banks of the North Saskatchewan, riding in a Red River cart atop the meagre load of household goods, my red braids blowing in the wind, and my feet dangling, warm in the sun.

"Bonny Margaret," Grandma McLeod used to call me, named as I was for my mother, red-haired Margaret McLeod, who had married Andre Le Claire, gayest and handsomest of the voyageurs who called at Red River. Though Papa had given up his roving for Mama's sake, she felt his heart was ever among the forests and along the singing rivers. She hoped the challenge of making a home on this new frontier might compensate for the loss of the wild free life of the voyageur.

Mother cradled baby Pierre in her arms, and Papa walked beside the oxen, prodding them to keep them moving over the uneven trail. The cart creaked and complained with every turn of the wheels. The brindle cow trailed disconsolately behind, bawling intermittently to her calf which lay in a nest of straw in the cart.

The broad river now lay before us. Here so close to its source in the Rocky Mountains to the west it was easy to understand why the Indians had given it the name, Saskatchewan or Rapid River, for it was a wild, untamed stream, its dark waters glistening in the afternoon sun. High cutbanks rose on either side, and in the flats below the trees were brushed with the new green of spring.

How well I remember the dugout in the cutbank, roofed with poles and sod, the tarp that had been our shelter on the trail became the door. Inside the dugout was dark and smelled of raw earth. The crude fireplace, hastily built of stones and chinked with the clay, filled the dugout with smoke, or made it oven hot. On the fireplace Mama made her crusty bread from the small store of flour brought from Red River, and cooked the savory stew of pemmican soup, the *Rubbaboo* which had served for many a meal among the voyageurs.

The dugout was just above the river crossing frequented by roving bands of Indians or the odd traveller from the southern plains heading toward Edmonton, then a village of little more than a hundred people. The town which in 1868 had boasted the only mill, a horse-powered grist mill, seemed a veritable metropolis, a touch of civilization to the incoming settlers for many years.

Now and again curious Indians would drop in, grunt in disgust at our white men's ways, but all the while greedily drinking Mama's hot tea. She was afraid she might offend them, for they were of rather uncertain temper. She extended to them the same courtesies she would have given any guest.

Often fur traders and voyageurs stopped and brought news of the home we had left behind in Red

In our dugout home in a cutbank along the river we were taking a place in the living history of those early days. I remember still Papa, gay and handsome voyageur turned farmer and my sweet brave Mama, who left home and family in Red River to go with him to strange new adventures in the west

by CLAIRE SHULER MCKINNON

River, or in coming from the south would tell of the wide prairies, the herds of buffalo, the vast Indian encampments and the Indian hunters on their piebald cayuses bringing down the buffalo with skilful aim, or stampeding them over the high bluffs while the squaws and their skinning knives waited below. The buffalo set their economy, providing food, clothing, shelter, fuel—and as the herds travelled, so did the Indians.

Buffalo meat and pemmican were also staples for the white people, and Papa often joined a hunting party to replenish our supply. He was as much at home on a horse, racing after the fleeing herds, as he had been in a canoe or walking with a pack of furs on his back with light tread through the silent forests.

The voyageurs spoke in glowing tones of the shining mountains, the lonely prairies, and the dashing

streams that fed the ever-widening Saskatchewan that flowed past our door. Papa's eyes sparkled as they talked, and as he remembered the rivers he had followed in his voyageur days, and Mama feared the lure of the wild would call him once again.

Papa now had little time for reminiscing, busy as he was with following the plodding oxen and the plow he had forged at Red River, as they broke the prairie sod.

I loved to run behind in the newly turned furrows, feeling the earth cool and damp on my bare feet—or to lie blissfully in the long, waving grasses, watching the cloud patterns in the endless expanse of sky. At times I played at scouting for hostile Indians, a game that was only half pretend. I strained my eyes watching for the distant smoke of a campfire, or peered over the crest of a hill to see if any of them were fording the river below.

Child though I was, I couldn't play all the time. I had to watch Pierre while Mama herded the cow and calf, or tethered them, and walked along the river banks gathering dry sticks in the aspen groves. She often took baskets and went out on the prairie to gather buffalo chips to add to our winter fuel supply. Pierre and I would

(Please turn to page 46)



Sometimes when Papa played his violin, Mama would put down her knitting and whirl about the room, her shawl and her long hair flying as she danced.

Illustrated by
Neil Hoogstraten

Good Seed Is Worth More

What Canadian seed growers should know about selling registered and certified field crop seeds is the subject of this article

by JOHN BLAKEMAN

Seeds which are tagged and sealed as "Registered" or "Certified" grade, guarantee the trueness of the variety.



[C.D.A. photo]

SEED production in Canada has become increasingly important during recent years. The number of kinds and varieties, the total production and the total value of seed crops has more than doubled in the last 30 years.

Factors which have encouraged production are: the adaptability of soil and climate to a wide range of crops in different parts of Canada; the success of Canadian plant breeders in producing improved varieties; the efficient work of the Canadian Seed Growers' Association in recording the pedigree of varieties and regulating the production of registered seed; early legislation by the Canadian government, establishing the Seeds Act, to provide high standards and facilities for testing and grading seed; action by provincial agencies in zonation of the provinces as to most suitable varieties and recommended uses; expansion of seed handling facilities by the seed trade and seed growers' co-operatives; the trend toward improved crop rotations; and finally, the search for new cash crops as an alternative to surplus wheat.

The seed production program varies considerably across Canada. The Maritime Provinces are principal producers of certified seed potatoes. Creeping bentgrass and brown top thrive on the east coast and were once profitable seed crops; but because of increased cost of harvesting and processing, little, if any, bentgrass seed is now produced. Swede turnip seed produced in the Maritimes is in good demand by growers of table stock in Ontario and elsewhere. During recent years quite an important production and export of registered seed oats occurred in New Brunswick.

Quebec is an important producer of timothy, medium red clover and alsike, usually having a

surplus of timothy for export. Montcalm barley, the most popular malting variety in Canada, originated at Macdonald College, Quebec. This variety and varieties of other cereal crops in Quebec are grown only as commercial grain for domestic use.

Ontario is one of the heaviest seed producers, specializing in hybrid seed corn, field peas, soy-

wheat and fall rye. This is desirable in such a vast grain-growing area, which requires ample pedigreed seed to maintain the purity and quality of commercial crops. It is unfortunate, however, that production of registered and certified seed wheat for export to the United States, outside of the quotas established for delivery of commercial wheat, has so exceeded export demand as to ruinously depress the price.

The prairie provinces are also noted for forage crop seed production, particularly brome, creeping red fescue, meadow fescue, timothy, crested wheat-grass, alfalfa, alsike, single-cut red clover and sweet clover. Manitoba is the only province to harvest Kentucky blue grass, which is taken principally from native meadows and pastures in the eastern and interlake districts. Saskatchewan is usually the biggest producer of brome, with Alberta a close second. Brome grass, alfalfa and sweet clover show up all across the prairie provinces. Alberta is the home of creeping red fescue, a profitable and popular seed crop which was introduced many years ago by George H. Clark, first Dominion seed commissioner. Normally, the parkbelt, or northern area of the prairie provinces, is the source of large quantities of alfalfa, alsike and red clover seed. These crops are valued for improvement of the grey-wooded soils, and for the seed as a cash crop. One handicap is that the livestock population is not sufficient to provide an outlet for hay or forage, in a year when the seed of alfalfa and clovers does not appear to be setting well.

The prairie provinces are giving a lot of attention to special crops, such as sunflowers, corn, soybeans, field and garden peas in Manitoba; oilseed rape in the three provinces; field and garden peas and beans in southern Alberta. Seed growers of these crops are becoming established and are catering to the local demand for adaptable varieties.

British Columbia maintains a nucleus of the vegetable seed industry, which reached a most important status during the war years. In northern British Columbia forage crop seed production has expanded, including alfalfa, creeping red fescue, clover and timothy.

AS markets continue to develop there is room for a great expansion of forage crop seed production in the western provinces. The home market for grass and clover is constantly expanding as a result of efforts by the provincial departments of agriculture to increase the use of forage crops in the crop rotation. Farmers are becoming aware of the need to increase acreages of hay and pasture crops for soil conservation, establishment of a reserve supply of good fodder and the improvement of livestock. As long as the surplus of wheat, oats and barley, with small delivery quotas, continues, common sense prompts farmers to increase livestock as an outlet for grain and forage crops. Consequently, there is a good local

(Please turn to page 36)



Rouging, or hand picking, the "off types," other crop plants and weeds from an elite plot at Jim Farquharson's farm, Zealandia, Saskatchewan. This supplements the seed-cleaning process.



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Under the Peace Tower

by HUGH BOYD

THE present session of Parliament may be relatively short, on account of the impending election, but it should not be boring. Pre-election sessions seldom are, and this time there is the added interest of watching a new leader of the Opposition as he and his colleagues strive to collect ammunition for the campaign.

The government's legislative program is skimpy. Yet there is no dearth of material for argument, and this is largely because of several matters that first came to public attention outside Parliament. They range from the C.P.R. strike to the Christian Hanna case.

One of these topics, it's true, was quickly put out of the way, not just for the session but presumably for the election campaign as well. The C.P.R. was strike-bound when the session began, and the parties were poles apart on the central issue—whether men who draw firemen's pay are essential on diesel locomotives on freight and yard service.

MEANWHILE, the Prime Minister lost no time in publicly twisting the arm of the C.P.R. president, Mr. N. R. Crump. He did it twice and with much adroitness, the result being that Mr. Crump agreed to the government's plan for a return to work, while a new tribunal took a searching look at the question of whether public safety would be impaired by the C.P.R.'s proposals.

All the opposition parties looked vastly relieved when the Prime Minister made his announcement late one Friday afternoon. They seemed just as happy as the government to have the issue pushed over until after the election.

No such barrier confronts the preliminary report of the Royal Commission on Canada's Economic Prospects. Members can talk about it as much as they like, and they are doing so. But they are arguing about a document which is really a skeleton, with all the background yet to come. Perhaps it was a mistake to put out the summary ahead of the main report, which will be in several volumes. If so, the government must take the blame.

For example, hardly any members can be found who voice wholehearted enthusiasm for the suggestions about greatly enlarged powers for the Canadian Wheat Board. Friends and opponents of marketing through the Board share a common skepticism on this approach to the problem of surplus disposal.

There has been criticism also of the Gordon Commission's chilly words about "substantial" irrigation schemes. This is a large subject, and everything depends on where any given irrigation project is located, what it is to be used for, and by whom. Yet the present report deals with irrigation in a single short paragraph, and about all that can be gleaned is that the Commission is afraid of over-production—presumably of wheat, though it doesn't say so.



THE chairman, Mr. W. L. Gordon, is already being kept busy making speeches and giving interviews to explain what the Commission did or did not mean in connection with various sections of its report. It might be a good idea to have his remarks collected and published as a companion volume to the preliminary report, for the guidance of orators of all political stripes in the coming campaign.

In one place the report predicts the further growth of both the co-operative movement and of "compulsory co-operative marketing boards based on the will of the majority." It is odd to find that contradiction in terms, "compulsory co-operation," turning up in a royal commission's report, but at any rate this subject, too, is likely to be heard about in Parliament before the session is over. But the reason is not so much what the Gordon Commission says about it but rather a recent set of decisions by the Supreme Court of Canada on the validity or otherwise of various schemes operating under the Ontario Farm Products Marketing Act and also of proposed amendments to the Act.

WITH perhaps one exception the court's decisions are by no means clear-cut. However, they add up to a majority finding that deductions made by local boards from the sale of growers' products are in the nature of service fees and therefore unconstitutional. Also that the court holds that deductions by processors and also deductions from all growers for the sake of setting up an equalization fund would be indirect taxation, and therefore unconstitutional.

So if a majority of the growers of a certain farm product want to extend the powers of the boards which they control, as far as these matters of levies are concerned, it will have to ask Parliament for the necessary legislation. This applies to other provinces besides Ontario, of course. Back in 1952 it was thought that the whole vexed question of divided jurisdiction had been settled when the federal Agricultural Products Marketing Act, which delegated federal powers in the fields of interprovincial and export trade, was found in order by the Supreme Court. But apparently this isn't so. V



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Nor has this development reached its peak. Though about four billion dollars have already been invested in finding and developing Canadian oil, experts predict another 20 billion will be spent during the next 25 years, bringing us still more industries, more jobs, and, of course, more oil.

Leduc's birthday was a happy day for us all!

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The Ontario Corn Committee has approved 13 new corn hybrids for use in the province. They are: DeKalb 67 and 414; Jacques 1158 J; Pfister 43, 55, 63, and 222; Robson 360; Wisconsin 613 and 335 A; Warwick 401 and 444, and Cornell M 4. A list of the selected hybrids, arranged in order of maturity and by climatic zones, will be available shortly at all agricultural representative offices. V

The Saskatchewan Freight Assistance Policy for the movement of seed grain within the province has been revised. The Department of Agriculture will now pay one-half regular carload rates directly to the farm. Anyone wishing to participate should contact his agricultural representative. V

New Zealand cheese, for the first time in history, sold wholesale in London, England, at a price higher than New Zealand's finest butter. U.K. observers credit this situation to an oversupply of butter in relation to demand, and strength in the cheese market, due to the relatively high price of meat and eggs. V

Diversification of Manitoba agriculture will be given impetus by the construction of a multi-million-dollar Campbell Soup Company plant at Portage la Prairie. The new factory is expected to provide farmers of the province with a cash crop market of several million dollars annually. V

Canadian livestock were flown in a mass airlift to the Dominican Republic to participate in an international livestock show. The January shipment included more than 150 head of dairy and beef cattle and sheep. Canadian breeds have been found to do well in this West Indies country. V

The Alberta Varietal Zonation Committee does not recommend the new malting barley, Parkland, for production in 1957. The decision was made on the ground that insufficient data is available as to its adaptability to the various soil and climatic zones in the province. V

A new C.N.R. "all-purpose" boxcar recently carried its first load of grain successfully and is now undergoing test for other merchandise. The boxcar is designed to provide door openings of various widths to facilitate fast and easy loading and unloading. V

U.S. farmers lost crops last year valued at \$37,000,000 as a result of grasshopper and cricket damage. A USDA survey indicates that more than 22 million acres of range land in 19 western and midwestern states are threatened with light to severe grasshopper damage in 1957. The greatest build-up of infestation appears to be in Minnesota and North Dakota. V

The Waterloo Cattle Breeding Association annual meeting was told that it is just as economical to operate an artificial insemination breeding center entirely on a frozen semen basis, as with liquid semen. The Association made the change-over a year ago and still managed to end the year with an operating surplus of \$18,263. Ward A. Shantz of Waterloo was elected president of the 6,400-member Association for 1957. V

R. Jones, a Netherhill, Sask., farmer, took three championships at the provincial seed fair held in conjunction with Farm and Home Week at the University of Saskatchewan. He topped the classes for registered spring wheat, hard red spring wheat and flax. His son, Kenneth, shared the honors by winning the junior wheat championship. V

The Australian wheat crop is expected to be small this year. Production is estimated at about 130 million bushels. If this volume is harvested, it will be about one-third less than the 1955-56 crop, and the smallest output since 1946-47. V

The U.S. surplus disposal program has moved six billion dollars' worth of farm surpluses into the world market, in the past three and one-half years. This figure includes deals for local currencies, barter, give-aways, and the recently launched competitive-bid cotton export program. V

Argentina has founded a national grain board, which is being interpreted as the first step toward returning grain trading in that country to private enterprise. Already the government has authorized free trading in oats, barley, rye, flax and sunflower seed. It is expected that free trading in wheat and corn will be authorized sometime in 1957. V

The United Farmers of Ontario, which has been dormant politically for the last 30 years, surrendered its charter in January. The party, the only one ever to break the Liberal-Conservative monopoly in Ontario, swept to power in its first election 38 years ago. It was defeated in its second election and was never a major political force thereafter. V

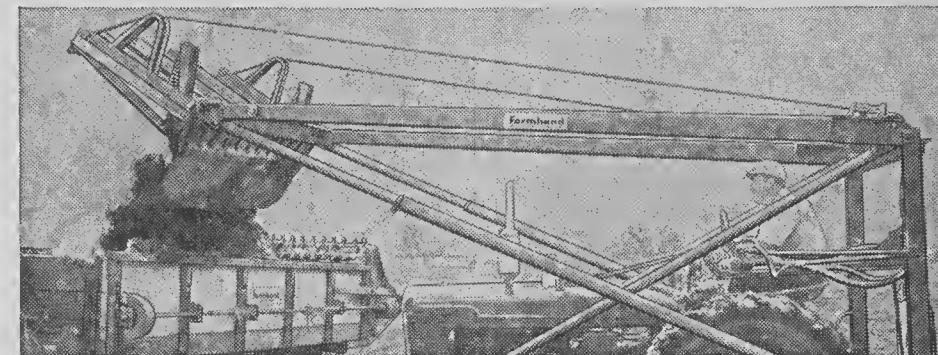
The U.K. government has established the Pig Industry Development Authority. The ultimate objective of the new body is to ensure that the industry will be able to compete with foreign competition, without substantial support from the exchequer. It is charged with the responsibility of securing improvement in pig production, processing and distribution. V

The Moose Jaw public stockyards handled 64,488 head of livestock in 1956, to establish a new record volume. The estimated sales value of all classes of livestock amounted to \$5,670,000. Auction selling retained its popularity, and nearly all producer consignments were sold by this method. V

Dr. Robert Glen has been appointed Associate Director, Science Service, Canada Department of Agriculture, at Ottawa. One of Canada's top agricultural scientists, he is well known for his research studies of wireworms, grasshoppers and the wheat stem sawfly. Dr. Glen will assist Dr. K. W. Neatby in guiding the broad program of agricultural research now carried on in Science Service laboratories across the country. V

World meat supplies are increasing to keep pace with the expansion in population. Production in the principal countries, excluding the Far East, was approximately 86.5 million pounds in 1955, or 27 per cent above the pre-war supply. V

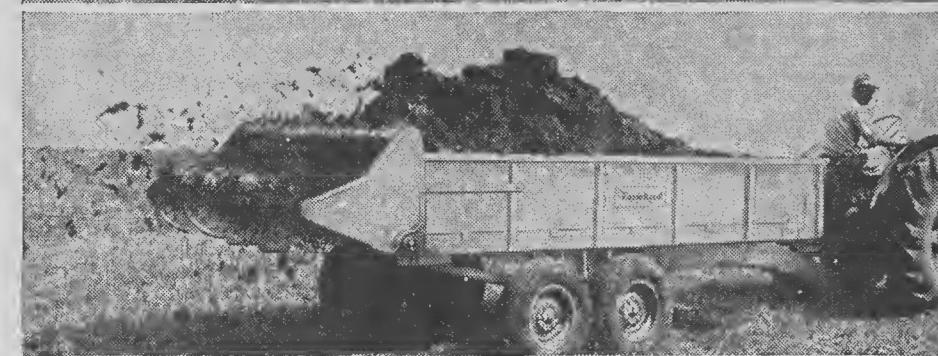
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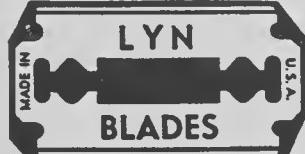
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LIVESTOCK



A new system of score cards is being used to simplify comparisons within a herd for selection of breeding stock in performance testing programs. Guide photo

New Score Card Helps Beef Cattle Selection

Daily gains can be calculated from birth to 24 months to reveal their performance

HERE is a new program to help in the selection of beef cattle breeding stock in Ontario, and it represents a further stage in the big swing to performance testing. The program was developed by the animal husbandry department of the Ontario Agricultural College, under Prof. George Raithby, so that every beef animal raised in the college herd would be on test.

A score card has been designed to provide an index for each animal. This requires that all of them are weighed at birth. They are then fed standard rations and weighed at regular intervals right through to 24 months of age. Daily gains are calculated to reveal each animal's performance, and the scores are based on a conformation score to provide an index for each, whether it is a heifer or a bull.

Once a group of records has been accumulated, a quick glance at them will show which animals have been working, and which have been loafing, and will provide a better basis for selection of breeding stock.

Beef specialist John Gill, of the O.A.C., emphasizes that this program is not designed to compete with or replace the present testing plan for beef bulls, which is administered by the Advanced Registry Board of Ontario, and is available to any Ontario breeder. The program is intended to supplement it by providing a herd performance score to be used to compare animals within a herd. It is not a method of comparing herds, because these are maintained under different farm conditions.

He says that he is confident that the program will prove its worth with the college herd, and may be adopted by many beef men, both purebred breeders and commercial cattlemen, interested in doing a better job of selecting breeding stock that will produce beef at low cost.

In the college herd, cows will be expected to raise their own calves as

a result of this program. However, those that can't will not be sacrificed immediately, but slackers will be weeded out of the herd gradually.

No attempt is being made to work out feed efficiency by this method. V

New Enemy Of Hog Worms

WORMING pigs with an antibiotic may soon become the standard treatment in the United States, according to A. C. Todd, parasitologist at the University of Wisconsin. The new drug is called hygromycin, and he claims that it is both safe to use and effective against more hog worms than any drug used now. The recommended dose is ten milligrams, but no ill effects have been observed following doses of 35 milligrams, even on young 30-pound pigs.

Hygromycin has the ability to kill worms, it is said, whereas some wormers only stun them so that they are passed alive. Its victims are ascarids, nodular worms, smaller roundworms, whipworms and lungworms, and Todd believes that it could be sold cheaply enough for swine raisers to include the antibiotic at low levels in all hog feed. V

Will Hormones Help Lamb Production?

THE number of multiple births of lambs, and especially the proportion of triplets and quadruplets, have been increased at the Central Experimental Farm, Ottawa, by the injection of a hormone into ewes four days before breeding at a normal heat period. But the average birth weights and weaning weights of the lambs were lower, and the mortality rate to weaning was higher, reducing the advantage gained by using the hormone.

A second experiment, now in progress, shows that a smaller hormone injection results in a higher number

of twin births than normal, but will not produce the larger number of triplets and quadruplets obtained in the first experiment. In twin births, the disadvantages of lower lamb weights and higher mortality rates are not as great.

The experiments are continuing to find whether adequate control of lambing percentages can be obtained at a level that will help the producer. V

Warbles Like The Best Meat

THE warble fly is an astute little insect, says William Lobay, supervisor of pest control, Alberta. It heads for the most expensive cuts of meat and beds down there until it is ready to break through the hide. Every animal showing warble fly damage is subject to a minimum loss of \$5, and it costs the Alberta dairy and beef industries annually about \$3 million.

Warble fly can be detected by a lump on the backs of cattle, and treatment should begin when the holes in the hide are about as big around as a lead pencil. Two or three treatments should follow at 30 to 35-day intervals, as long as live grubs are present, using derris or rotenone sold as warble powders or warble wash.

In smaller herds, the best method is to prepare a wash solution and scrub it over the backs of cattle with a stiff brush, which has been dipped in the solution. This should open the crust which covers the holes, and it is essential that the insecticide penetrate the opening to kill the grubs. The dry powder form may also be used by rubbing it into the holes.

The larger herds need a high pressure sprayer capable of delivering up to 600 pounds pressure, using rotenone powders specially prepared for this purpose. Some communities have formed posses to hunt out and destroy the warble. V

Formula For Creep Feed

CREEP feeding is recognized as an important part of pig production. It is the practice of starting suckling pigs on solid food when they are two to three weeks of age, and is made necessary by the inability of sows to give them a high enough level of nutrition during a period of rapid growth and development. As a result of creep feeding, the pigs are heavier and more uniform at weaning, the mortality is reduced, and they are less subject to set-back at weaning.

All this can happen only if the creep feed is nutritious, easily digested, and low in fiber content, which is why the Brandon Experimental Farm, Man., has concerned itself with the type of ration needed. The result has been good success with a ration of 100 pounds of wheat middlings, 50 pounds of ground wheat, 100 pounds of chopped oats (hulls removed), 40 pounds of good quality fish meal, and ten pounds of a combined mineral, vitamin and antibiotic supplement.

Using this formula, 491 pigs averaged 37.8 pounds at eight weeks of age at Brandon. There are also commercial pig starter rations, which can be used to advantage by the producer who cannot mix his own feeds. V

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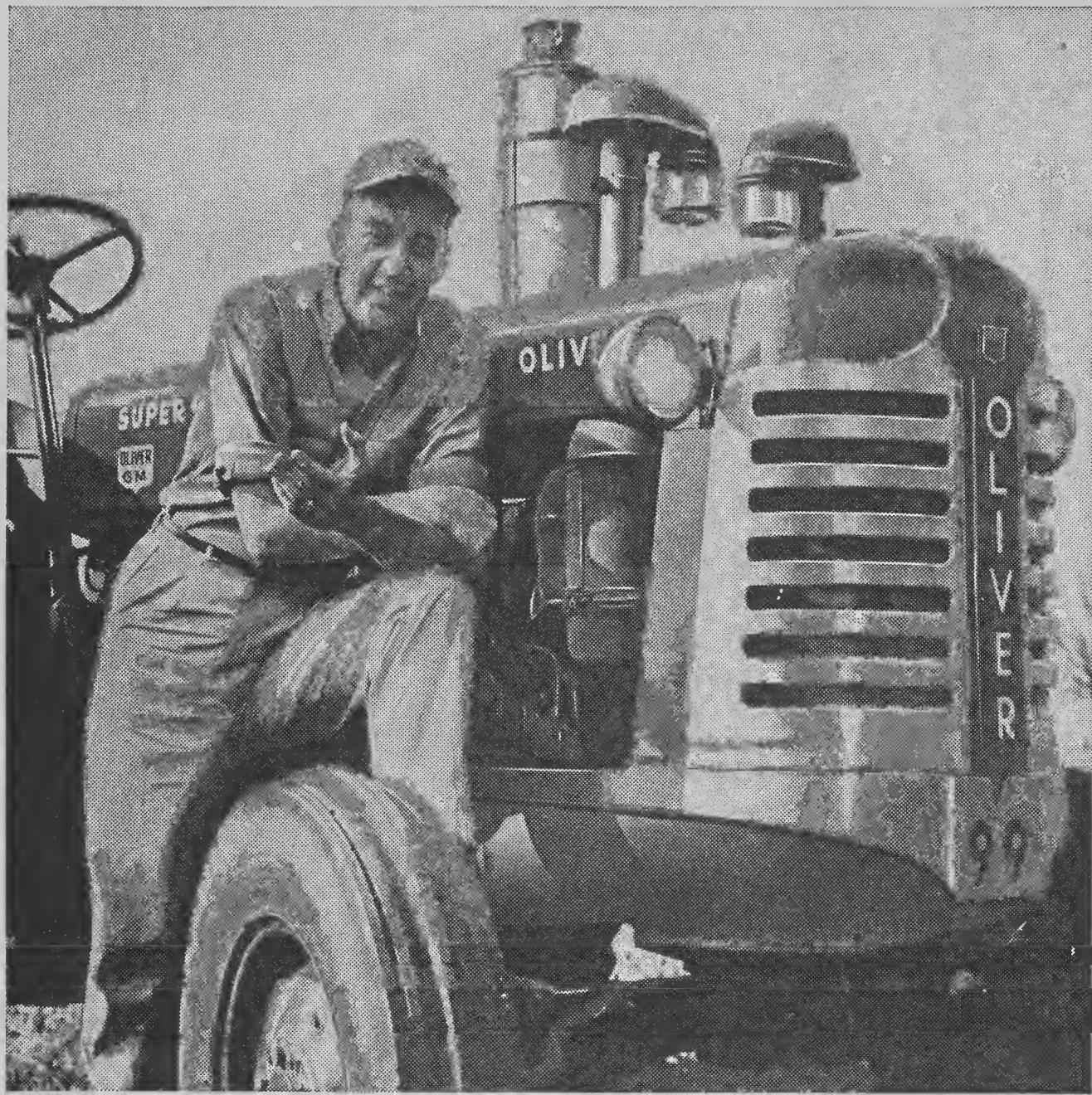
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LIVESTOCK

Dairy Cows Need Warm Water

A PLENTIFUL supply of clean drinking water, with the chill removed in winter, is especially important to dairy cows because they need large amounts of water to keep their milk production high, and for other body processes. This aspect of good management is suggested by Dave Ewart, who is supervisor of dairy herd improvement with the Saskatchewan Department of Agriculture.

He says that milch cows will go outside if necessary to drink during cold weather, but they will not take the amount they need unless it is warmed slightly. They need about four gallons of water for each gallon of milk they produce, and if they do not have sufficient, production will decline and it is very difficult to bring it up again.

Another risk taken when animals go outside to drink in severe weather is that the teats may become frozen, possibly leading to infected udders, inconvenience and economic loss.

The most satisfactory arrangement is where drinking bowls are installed in dairy barns, but if an inside water supply is impossible, an oil or coal and wood warmer can be inserted into a fairly large water trough, and electric heaters of the insert type are now being used extensively on farms with power. Both these types of heater are reasonably priced, and pay for their cost in a short time, even where a small dairy herd is kept. V

Protein Needed for Wool

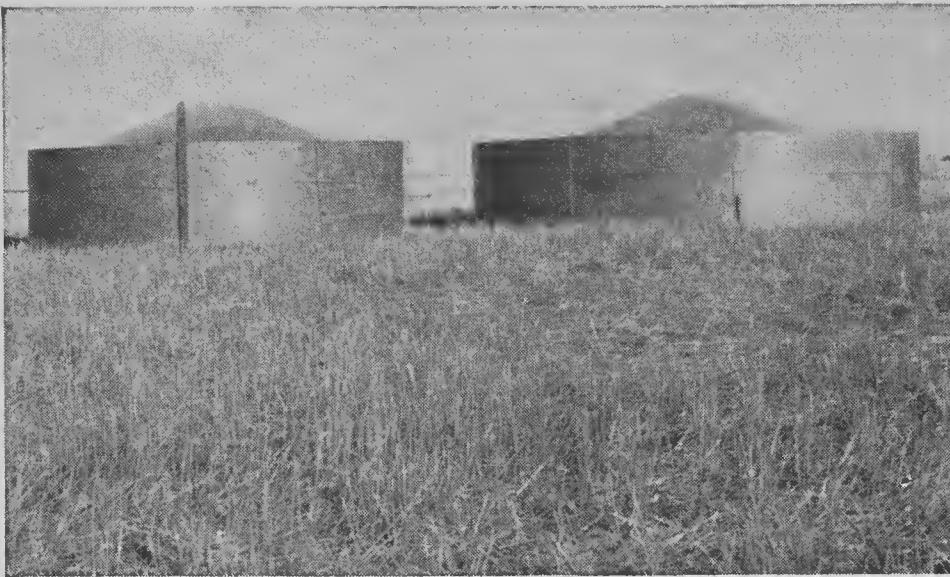
BREEDING ewes maintained under range conditions should receive a protein supplement at least during the last six to eight weeks of pregnancy, and during lactation until green grass is available, says S. B. Slen of Lethbridge Experimental Farm, Alberta.

Recent results at Lethbridge have shown that on a fairly low protein ration the wool production of ewes raising twin lambs was 19 per cent less than those raising singles. When the protein was increased, the difference was 11 per cent. The low ration contained about seven per cent protein until six weeks before lambing, and ten per cent thereafter. The high ration contained 13 per cent protein.

Ewes with twins produced less wool because of shorter fiber length, a decrease in fiber thickness, and the cessation of some wool follicles. The decline began sooner in ewes on the low ration. The greatest wool growth was in the October to December period, when the ewes were bred. Wool production started to decline in February, and declined even further by the period of advanced pregnancy in April. Lactation placed the greatest strain on wool growth, and results indicate that the rate of production at this time was less than 45 per cent of that in the October-December period.

A ration containing at least ten per cent protein, which is the equivalent of good alfalfa hay, has proved the most satisfactory for both lamb and wool production. V

FIELD



[Guide photo]
Grain storage, a major problem for western farmers, needs constant attention if temporary protection against weather is provided for field piles.

Durum or Bread Wheats?

HERE is a warning about durum wheat in western Saskatchewan, where the acreage seeded to this crop has increased greatly during the last two years because, until recently, there were no quota restrictions on durums, while bread wheats were piling up in the granaries. It is an attractive crop, but it has its limitations.

Yield tests have been made at the Scott Experimental Farm for the past 11 years, comparing the standard bread wheat in the area, Thatcher, with that good-yielding and good-quality durum, Stewart. This showed that Thatcher gave an average yield of 21.9 bushels per acre, compared with 18.2 bushels for Stewart, or a difference of 17 per cent in favor of Thatcher. In addition to this, Stewart was a week to ten days later in reaching maturity than Thatcher was, and this is a hazard in an area where early fall frosts often occur. For example, durum wheats in western Saskatchewan were more severely damaged than the bread wheats by frosts in the third week of August, 1956. It is not suggested that durums are the wrong crop for this area, but that they have some disadvantages.

considered when the land has not been fertilized recently. Superphosphate alone should be considered for late maturing varieties, such as Lapin.

Watch Out For Frosted Seed

THE importance of having seed tested for germination is well illustrated by the results obtained up to December 31 at the Plant Production Services Laboratory, Canada Department of Agriculture, at Winnipeg. J. E. Robertson reports that frosted oat seeds are going to be a problem, because the germination of 25 per cent of the samples tested was below the minimum requirement of 65 per cent germination for No. 3 seed. Such seed, if used, would prove expensive, for the rate of seeding would need to be doubled.

The barley situation is somewhat better, but there appears to be sufficient frosted seed to have a marked effect on germination percentages. Flax also has been affected, but wheat seed germination is not causing much concern, especially as there is often good germination in spite of frosting. However, this does not mean that germination tests are unnecessary.

A major difficulty faced in germination tests is the tendency of farmers to send combine-run samples. Thus immature seeds are included in the tests, and the results can be misleading. By cleaning the seed and then sending samples, instead of waiting for germination results before cleaning, farmers obtain a much more accurate germination percentage for the seed they intend to plant.

Advantages of Birdsfoot Trefoil

BIRDSFOOT trefoil has several advantages as a legume in pasture mixtures. It grows in regions where alfa'fa and red clover are adapted, and although it is slower to establish than these other legumes, it is quite persistent under heavy grazing conditions once it is established. F. S. Nowosad of the Central Experimental Farm, Ottawa, also reports that in pasture tests birdsfoot trefoil has shown drought resistance, continuing to grow, blossom and set seed under heavy

Phosphorus For Field Beans

FIELD beans need phosphorus more than any other element in fertilizer, according to experiments at the Millville Illustration Station, N.B., which were designed to find the best formula for that area. Only small amounts of nitrogen and potash are needed, and yields are actually depressed by heavy applications of these.

The Millville results indicate that of the fertilizers available at present, 3-15-6 should give the most economical response. This formula comes with or without boron, and should be used without boron because beans are very sensitive to this element.

The rate of application depends on the fertility of the soil, but at Millville it was found that 1,000 pounds of 3-15-6 per acre gave good results on land which had been in potatoes during the previous year and was in good condition. Heavier rates should be

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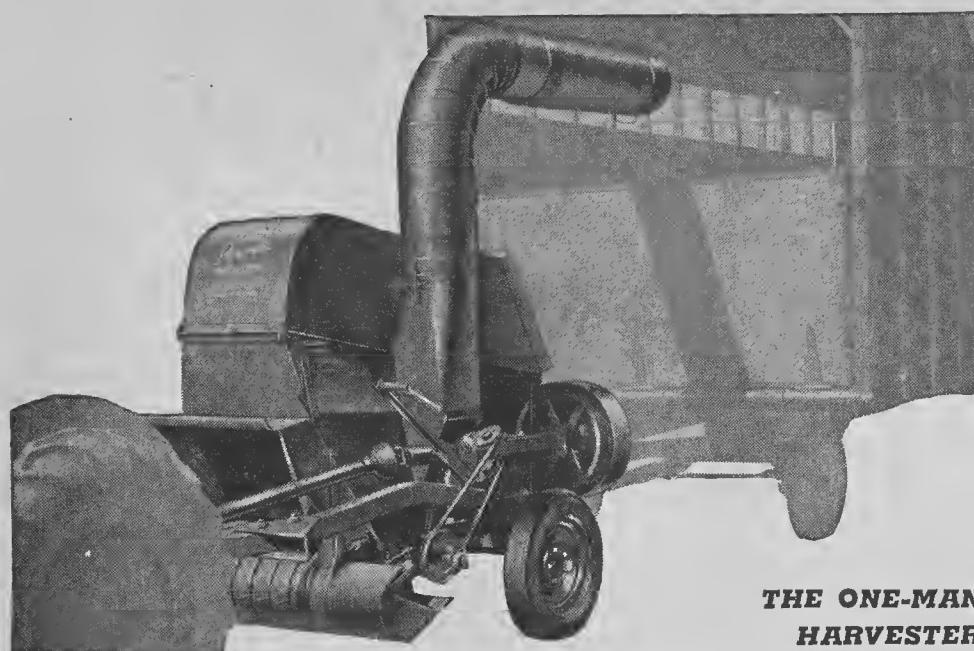
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FIELD

clipping and trampling treatments in hot, dry weather, when wild white clover, white Dutch clover, ladino and red clover showed considerable damage.

Birdsfoot trefoil cannot tolerate too much competition in the year of seeding and the first year or so after that. It should be sown in very simple mixtures with a grass that will not crowd it too much, such as timothy. The recommended rate is six to eight pounds of birdsfoot trefoil and six pounds of timothy per acre, and even a lower rate will make good pasture with timothy, if you are patient. It needs a different seed inoculant from that used for common legumes. The recommended variety is Empire. ✓

When to Cut Your Corn

HOW early should corn be cut for feeding green from the field? Generally speaking, it is better to avoid the loss in yields that can be expected when corn is cut very early, but you should not allow this to stop you from cutting at the silking stage, if it is necessary to protect the growth on pastures in periods when pasture production is low.

The question of corn yields at different stages of growth was taken up at the Agassiz Experimental Farm, B.C., making the first cut at silking and continuing at weekly intervals until the dent stage was reached. This showed an increase of dry matter between silking on August 8 to September 27, of 5.1 tons per acre, an increase in percentage of dry matter totalling 16.4, an increase of green weight of 6.8 tons per acre, and a difference in height of 32 inches.

The conclusions reached at Agassiz are that feeding corn green from the field is a sound way to conserve or supplement pasture, and that the best time to harvest is at the early dent or dough stage, when the first kernels are beginning to dimple or dent, for the highest nutritional value. ✓

Seeding Rates For Oats and Barley

OATS and barley give the most profitable yields on fertile soil when the rate of seeding is moderate, according to tests made by L. P. Jackson at the Nappan Experimental Farm, N.S. He used a four-year rotation of turnips, oats, and two crops of hay, with 16 tons of manure per acre to supply fertility during the rotation, which was plowed down before the turnips were planted. Grain was seeded as a nurse crop for a grass seed mixture.

In one test, oats were seeded at 2, 2½ and 3½ bushels per acre, and the barley at 1½, 2¼ and 3 bushels. Average yields over a 15-year period showed little difference in yield between the three rates of seeding for oats or barley. In fact the 2-bushel rate for oats and 1½-bushel rate for barley produced as much grain as the highest rate did. Furthermore, hay yields following the lowest rate of seeding were higher than for any other rate. ✓

Fertilizers

Instead of Summerfallow

SUITABLE commercial fertilizers may be an alternative to summerfallowing as a means of maintaining the yield of cereal crops grown on stubble, says S. R. Church, following tests in the black soil zone served by the Lacombe Experimental Farm, Alberta. He tried rates of nitrogen at zero, 20, 40 and 80 pounds per acre in combination with zero, 10, 20 and 40 pounds of phosphorus, and this is what he found in a two-year period.

The greatest yield response resulted from nitrogen, which gave an average increase of 11.8 bushels per acre for the three treatments, compared with 5.1 bushels for the phosphorus applications. The best returns per dollar spent on nitrogen occurred between the 40 and 80-pound rates, but even 80 pounds were profitable, and further increases in yield might be expected at even higher rates before the cost of nitrogen would equal the value of the higher yield.

Phosphorus failed to show a profitable increase beyond the 10-pound rate.

Summerfallowing helps in the storage of moisture and the build-up of plant food, and that is why it is widely used for maintaining yields, but it is expensive and wasteful on account of the tillage required, the loss of a crop for a year, the loss of part of the plant nutrients by leaching, and the depletion of organic matter. Fertilizers may be the alternative to summerfallow. ✓

Treatments For Loose Smut

ENOUGH seed for a seed plot each year should be treated to control loose smut of wheat and barley, according to the Manitoba agronomists. One of the recommended methods for treatment is first to soak the seed in water at 70 degrees F. for five hours, dip in hot water at 126 degrees F. for 11 minutes for barley, and at 129 degrees F. for wheat, then dip in cool water and dry thoroughly to prevent molding and premature sprouting.

This hot-water treatment is difficult to apply, and may reduce germination, so the agronomists have worked out other treatments for barley only. One of these is the water-soak method, which requires soaking in a solution of two per cent common salt in water, keeping the seed covered with an inch or two of the solution for 70 hours at 70 degrees F., or for 55 hours at 76 degrees F., or for 30 hours at 86 degrees F. Then dry the seed until it will pass through the seeder readily, or until it is dry enough to store safely.

The other method is known as "dip and pile." Soak the seed in the solution for two hours at 76 degrees, then drain the seed and put it in a closed container and hold it at 76 degrees F. for 65 hours, or 86 degrees F. for 35 hours. Then dry the seed until it will pass through the seeder readily, or until it is dry enough to store safely.

Seed can be treated in milk cans, one bushel in each can, or in plofilm bags. ✓

FIELD

Using Alfalfa Alone

ALFALFA seeded alone on illustration stations in north-central Ontario has given yields as great, or greater, than when it was seeded in mixtures with grasses and other legumes, provided that the soil was suitable for alfalfa. C. B. Dalton, who has been conducting these tests for the Canada Department of Agriculture, says that mixtures containing red clover may slightly outyield pure alfalfa in the first year after seeding, but the disappearance of this species in the second crop year seriously reduced the yield of mixtures containing it.

Alfalfa variety is important, and in this area Ladak consistently out-yielded Grimm, the greater yield being accounted for in the first hay cut, which compensated for a rather poor second growth. Pure seedings of Ladak at 16 pounds per acre gave the best yields.

In areas where alfalfa was not suited, double-cut red clover has been the most productive legume. Swards are left down for more than a year, and red clover must be seeded in a mixture with grass, but no advantage was found in mixing with other legumes, such as alsike and ladino clovers. V

Early Flax Yielded Well

RAJA, which was added to the recommended varieties of flax for Manitoba last year, has strong straw and resistance to rust and wilt, although it is susceptible to pasmo. It is an early-maturing variety, and in field tests at the Brandon Experimental Farm, it excelled all other varieties.

The yields at Brandon in bushels per acre were as follows: Raja 23.6, Redwood 20.4, Rocket 20, Marine 16.4, and Sheyenne 15.4 last year. In a four-year period, it was the highest yielding of the early varieties, but was slightly below the late-maturing types, yielding 22 bushels per acre, compared with Redwood 25, Rocket and Norland 23. Marine yielded 18 bushels, and Sheyenne 17.

Raja ripened in 87 days, on the average, whereas Sheyenne took 88. V

Choosing a Weed Sprayer

EXPERIENCE at Michigan State University has shown that a good weed sprayer should have an inexpensive pump, which is easily replaced, resistant to wear and chemicals, and with a minimum capacity of four gallons a minute. There should be some means of keeping the chemical solution well mixed, either by mechanical or jet agitation, using a bypass from the pumps. See that there are 50-mesh screens for the suction line and nozzles, and that there is a gauge which measures pressure accurately in the range of 20 to 100 pounds per square inch. Finally, the sprayer should have flat, fan nozzles with replaceable tips, and wide-angle nozzles set at 73 to 80 degrees will permit the boom to be carried closer to the ground, reducing spray drift. V

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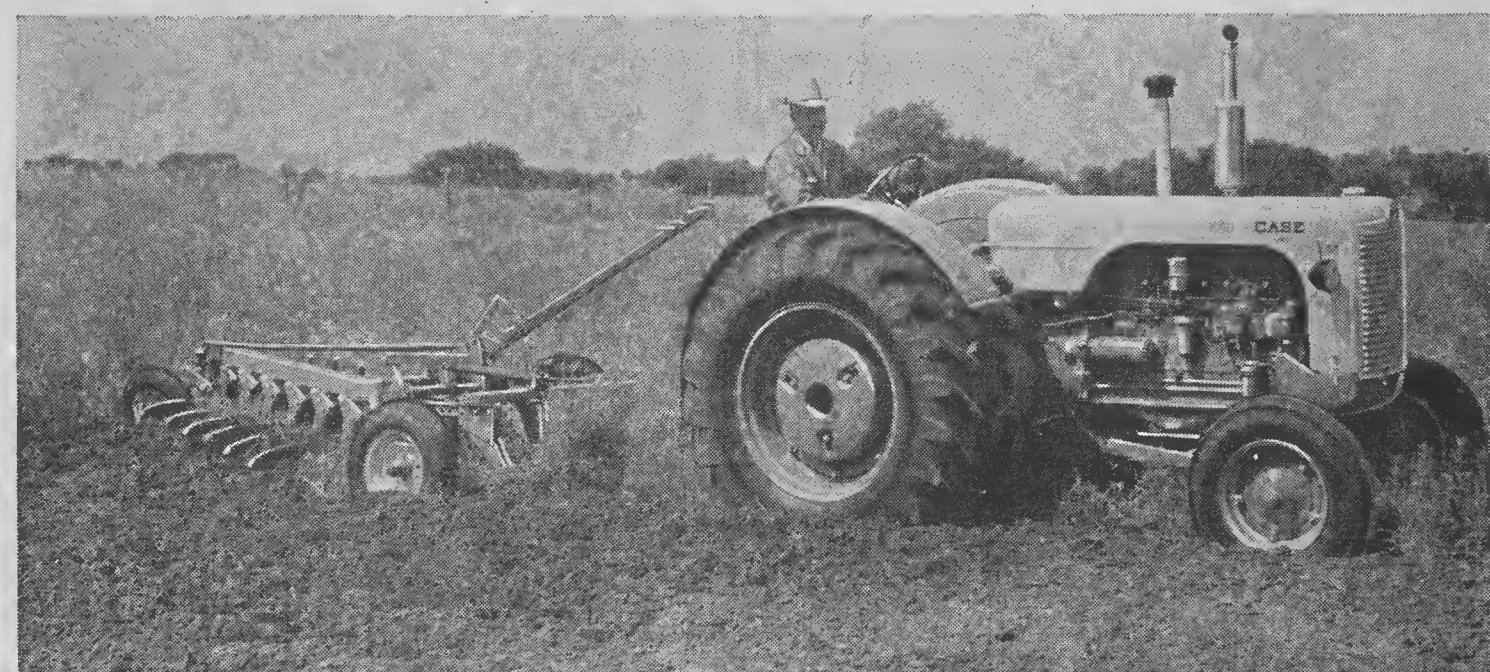
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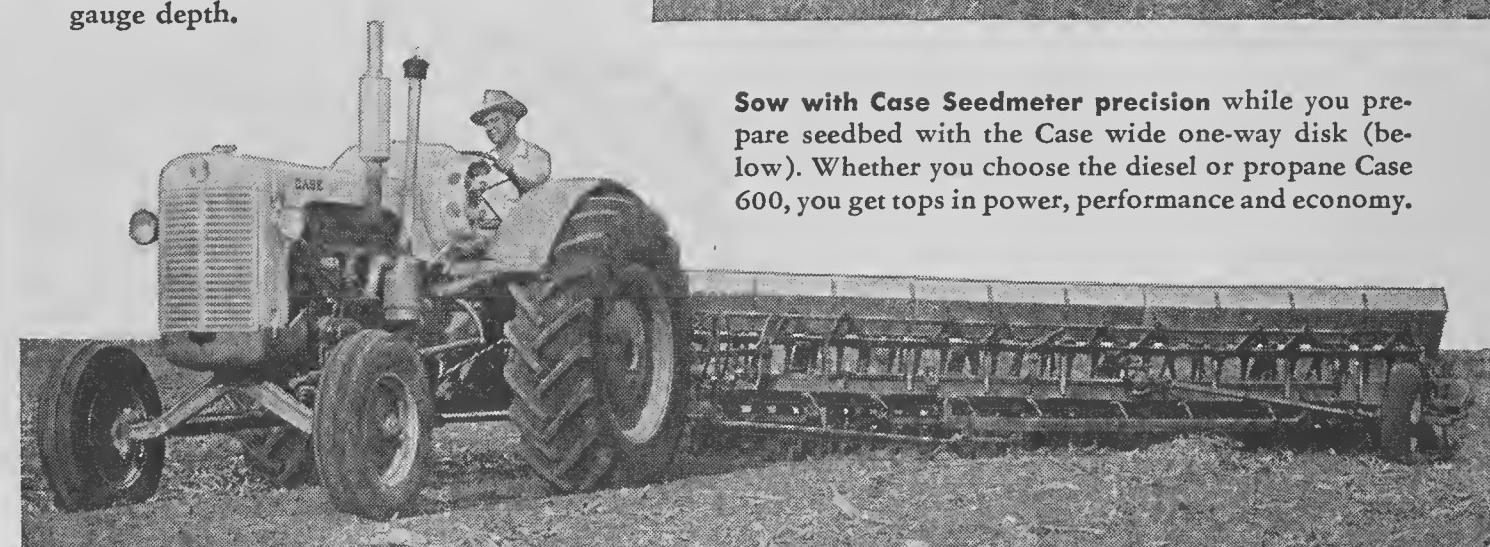
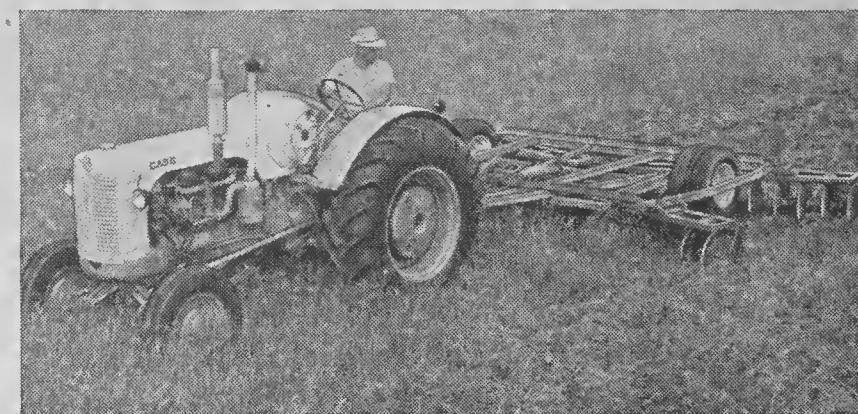
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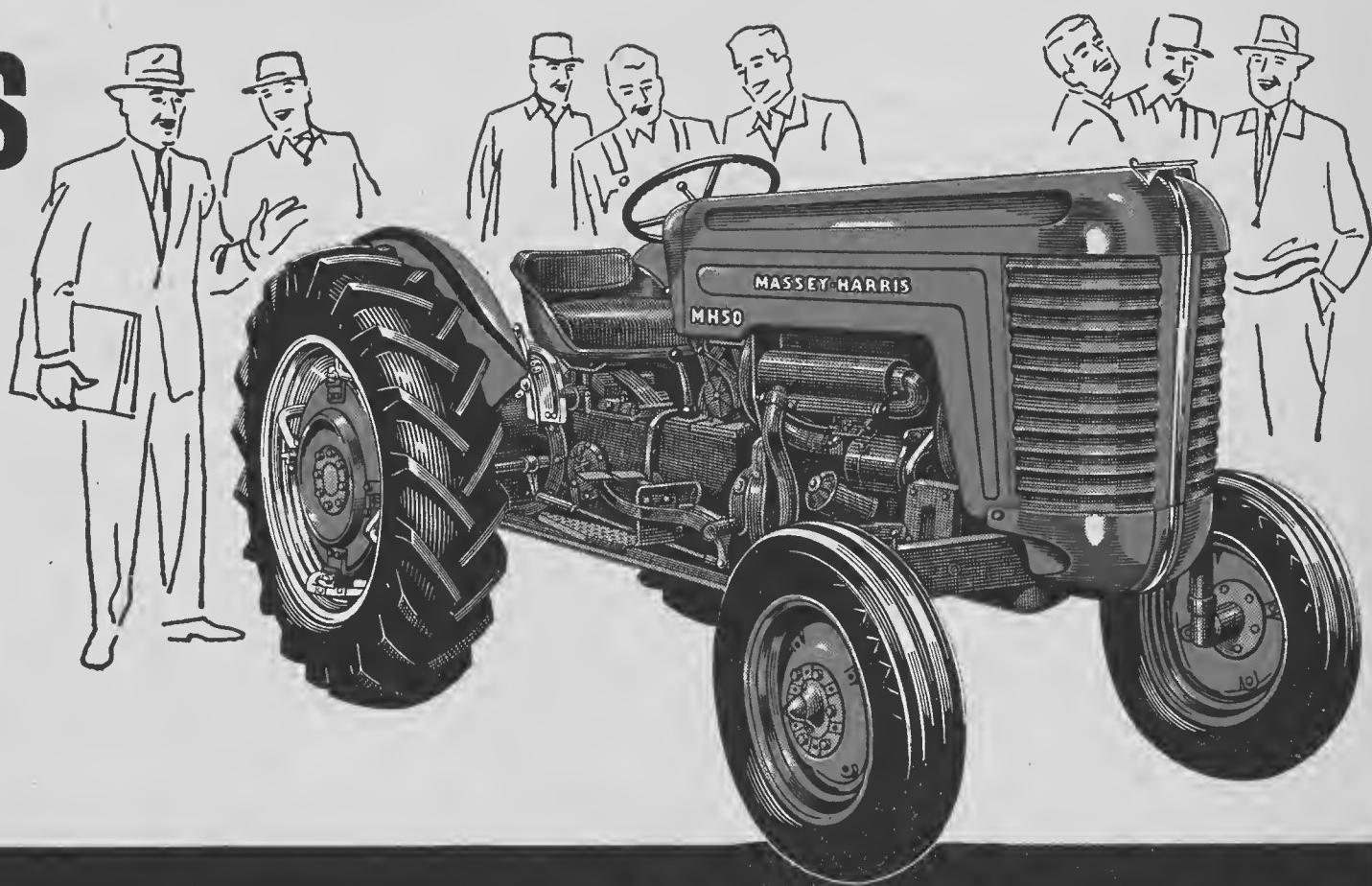
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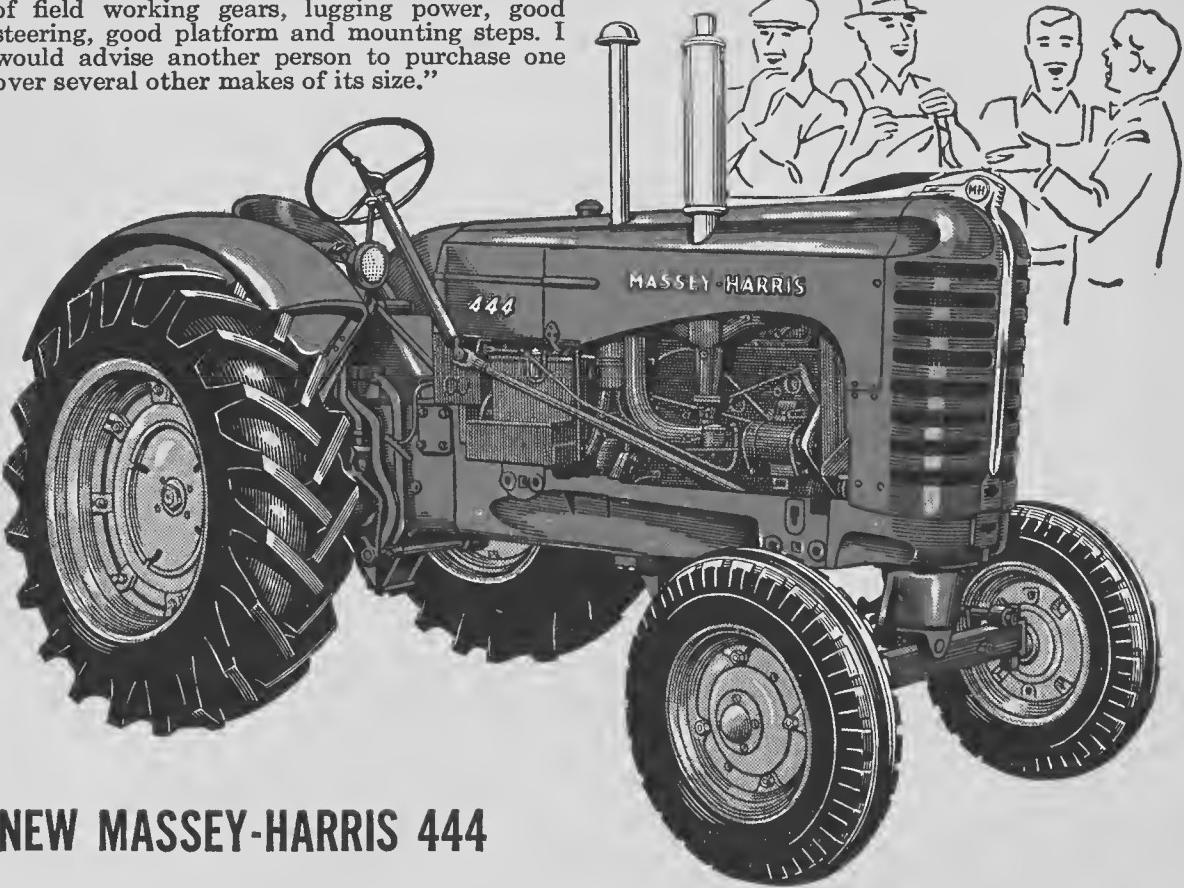
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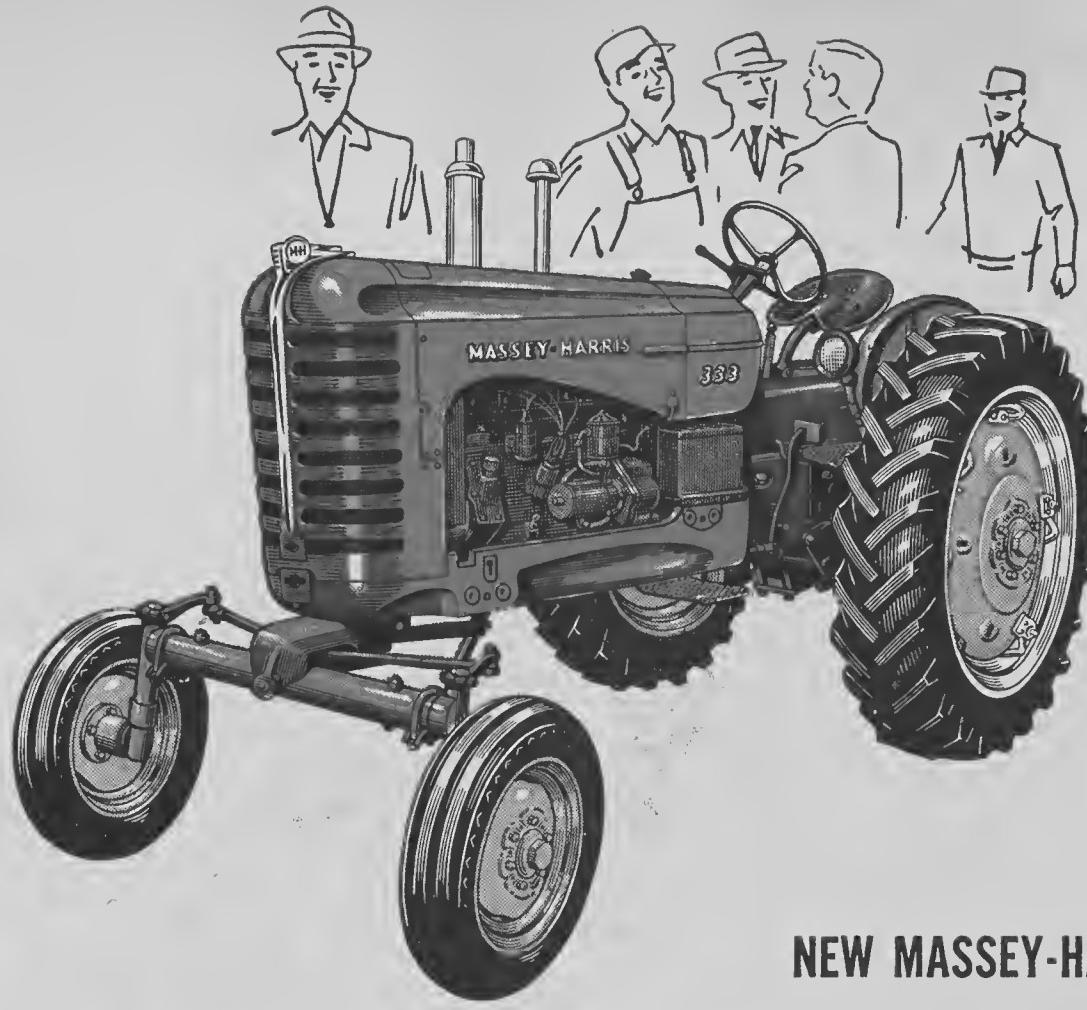
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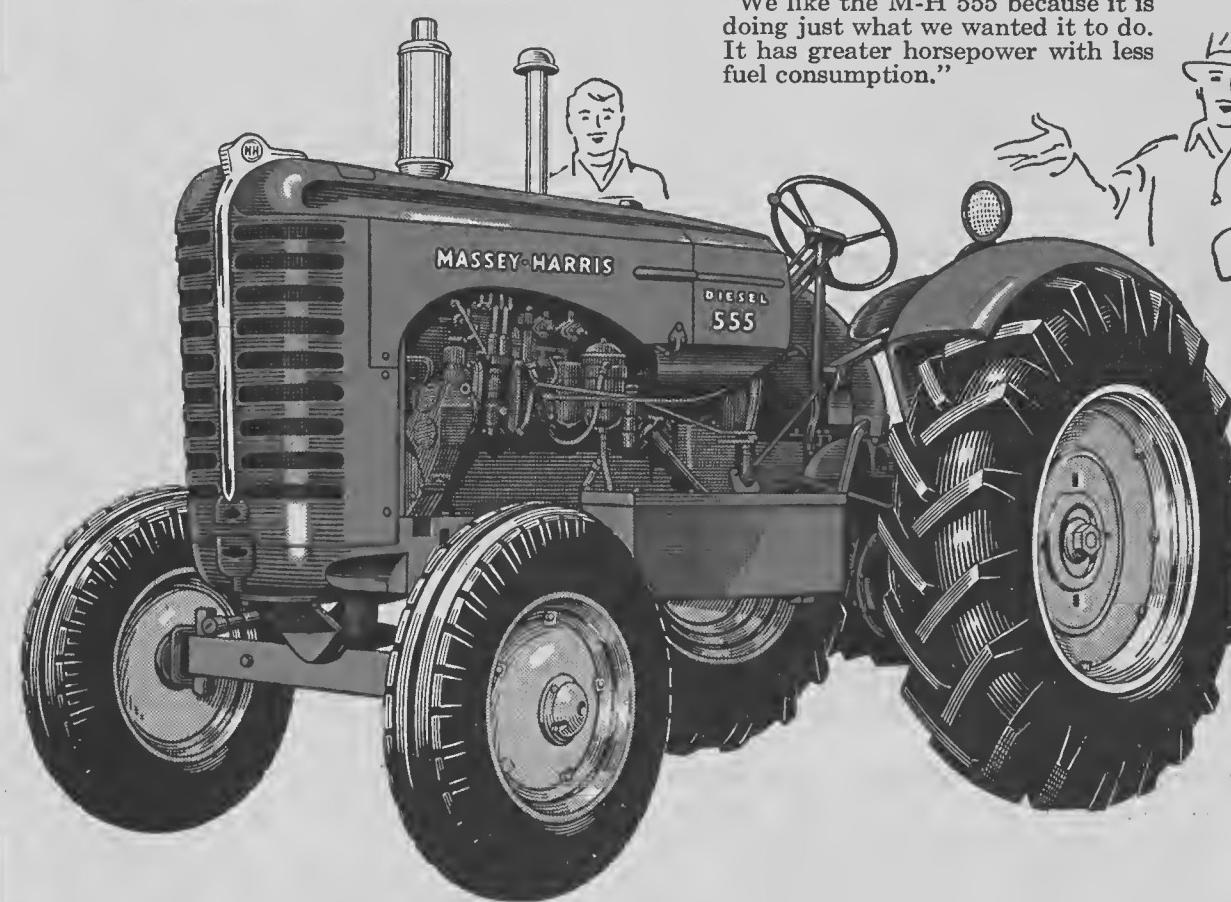
Mr. Emile Peticlerc, Cap Sante, Que.
"I like the M-H 333's economy, its great power and its various speeds which adapt it to each individual task."

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Mr. August Barlage, Humboldt, Sask.
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HORTICULTURE

[Don Smith photo]

Pruning grape vines is a winter job for grape growers. Pruning begins in January but not much was done in southern Ontario until after January 15.

Annapolis Valley Needs New Orchards

R. P. LONGLEY, Experimental Farm, Kentville, N.S., says that the Annapolis Valley needs a substantial number of new apple orchards of high-yielding, superior-quality varieties suitable for the international apple trade.

If the valley is to remain a major apple-producing area in Canada, extensive plantings will be needed. The post-war years saw a large number of old orchards and old varieties removed. Up to 1941 the disappearance of old trees was about two per cent per annum. Between 1941 and 1951 this rate was increased to six per cent, so that at the latter date Nova Scotia orchards contained less than half of the number of trees present at any previous time in this century. Non-bearing trees under ten years of age were only 17 per cent of the total.

Mr. Longley urges that if Nova Scotia growers are to produce and sell apples at a profit, costs must be held at a minimum consistent with high yields and quality. Consequently, new orchards planted now should be put in the best soils available, located with as much protection as possible from wind and frost, and be in blocks of sufficient size to take advantage of labor-saving equipment, such as airblast sprayers. He lists varieties, mixtures of varieties for pollination, orchard sites and locations, orchard plans, soils, size of enterprise, mechanization and efficient management, as important factors to be taken into consideration, because they have a direct relationship to profits.

Small Hardy Foundation Shrubs

HORTICULTURISTS at the University of Alberta have reported success in finding shrubs for foundation planting that are small in size and attractive as well. Woody plants too often out-grow their usefulness in these close-to-the-house locations.

Professor R. H. Knowles finds the dwarf European highbush cranberry to be an extremely dense little plant that will attain a height of about two and one-half feet and be useful at corners and entrances. It leaves a thick little shrub, upright, oval in form when the leaves have fallen. The

Oregon grape, though it likes some protection from the wind, grows to about three feet, and has attractive light-blue fruits. The leaves remain green over winter, though not active, and resemble holly leaves. The dwarf cotoneaster with its spiked, shiny leaves that remain all winter, has conspicuous flowers and delightful red berries in the fall. It is prostrate in habit and may get to be about ten inches in height. Other dwarf shrubs are dwarf burning bush (two feet), dwarf Norway spruce (three feet). ✓

Insect Control On House Plants

HOUSEWIVES who are bothered with insects on the plants growing in the house, would do well to write for a copy of a new four-page Canada Department of Agriculture publication entitled "Control of Insects on House Plants." It is written by G. G. Dustan, of the Entomology Laboratory, Vineland Station, Ontario. It deals briefly, but effectively, with such insects as plant lice, or aphids, mealybugs, scale insects, white fly, spider mites, as well as one or two other similar pests. It also suggests control measures for small white maggots in the soil, white grubs in potted plants, and earthworms where troublesome. Copies can be obtained from your nearest experimental farm, or agricultural representative office, or Information Service, Canada Department of Agriculture, Ottawa. ✓

Black Currant Is Resistant to Mildew

J. A. WALLACE, Experimental Farm, Beaverlodge, Alta., believes that prairie gardeners will welcome the new black currant variety, Willoughby, introduced recently by nurseryman A. J. Porter, Parkside, Saskatchewan, with its resistance to mildew. This disease, says Mr. Wallace, has reduced the yield and quality of all older black currant varieties tested. It has been tested for six years at Beaverlodge, and found hardy, vigorous, and productive, with large berries, borne in good-sized clusters and equaling standard varieties in quality. Fruits do not mature quite as evenly as Magnus, and for high quality throughout the crop, two pickings are usually required. ✓

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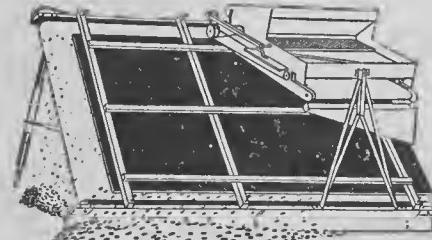


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POULTRY



[Guide photo
Lighting in poultry houses can increase winter egg production by as much as 30 per cent, but only if it is arranged and operated systematically.

Dubbing for More Eggs

DUBBING, or cutting the comb and wattles, is a simple operation that can pay dividends. T. M. MacIntyre of the Nappan Experimental Farm, Nova Scotia, lists several advantages.

Clipping the wattles helps in keeping the litter around the water fountain dry, as there are no wattles to get wet and drip onto the litter. Also, combs sometimes interfere with birds in laying cages, when they are reaching through the wire for feeding and watering.

The comb and wattles are best clipped when the birds are young. From day-old to a few weeks is the best time. A sharp pair of scissors can be used.

Whole Oats For Broilers

S. E. BEACOM has done some useful work at the Melfort Experimental Farm, Sask., on the feeding of whole oats to broilers. The financial returns were not calculated, but he believes that the cost of gain favored the groups fed rations containing up to 45 per cent of whole ground oats, although market returns would be appreciably lower on birds fed more than five per cent whole ground oats. This was because seven to 19 per cent fewer birds graded A or Special for finish in the groups fed ten per cent or more of whole oats.

He experimented by partially replacing the basal ration of wheat and corn with whole ground oats at five per cent increments, to give a series of ten treatments, including a control group from day-old to eight weeks. The basal ration also included soybean oil meal, fish meal, meat meal and alfalfa meal, with vitamin and mineral supplements, and Aureomycin at 12½ milligrams per pound of ration.

The level of oats had no effect on chick mortality, which did not average more than six per cent in any group. Final live weights indicated that birds fed no oats weighed heavier than birds fed the other rations, and birds fed 45 per cent oats weighed about ten per cent less than the control birds. Birds receiving five to 15

per cent oats needed the same, or slightly less feed to put on a pound of gain compared with birds without oats. Birds receiving 20 to 45 per cent oats needed 3.11 to 3.15 pounds of feed to put on a pound of gain, as compared with three pounds for the control birds. Since oats are cheaper in western Canada than wheat or corn, all lots gained as cheaply or cheaper than the control lots did.

Control birds scored 58 per cent Special or A grades, and the birds on rations containing more than five per cent oats graded seven to 19 per cent fewer Specials and A's. The tests will be repeated next summer.

More Eggs With Proper Lighting

ALTHOUGH electric lights in poultry houses can increase winter egg production up to 30 per cent, at the time when egg prices are usually high, the increase in profits depends on whether lights are properly installed and used, according to Irving J. Mork, poultryman, North Dakota Extension Service.

He suggests that the lighting should be used every day, beginning about October 1 and continuing until April, because irregular lighting may cause molting and interrupt egg production. Daylight supplemented by electric light will ensure uniform lighting for 13 or 14 hours a day.

Mork recommends 40-watt bulbs, at least, or fluorescent lamps with the equivalent output. One lamp will provide light for 200 square feet of floor, and there should be direct light on the perches to bring hens off the roosts. Automatic switches and dimming devices are easy to install.

Debeaking Stops Cannibalism

DEBEAKING birds is an effective way to prevent cannibalism, according to the Nappan Experimental Farm, Nova Scotia. It is rapid, painless, and does not appear to have any adverse effects on egg production. It may be done safely at any time, even during heavy production. An electric debeaker, which cuts and cauterizes, is best.

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A. C. Cooper tells of revolution brought by frozen foods

"Frozen foods are revolutionizing daily living," says A. C. Cooper, Manager of the Frozen Foods Warehouse of Dominion Stores Limited. "They not only save the housewife's time and cut down waste in preparing meals; they also make available all year many tempting fruits and choice meats — and a far wider variety of vegetables and seafood — at the peak of their appetizing freshness."

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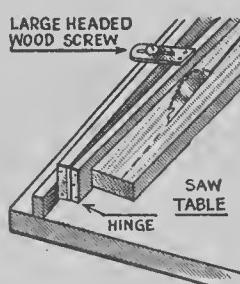
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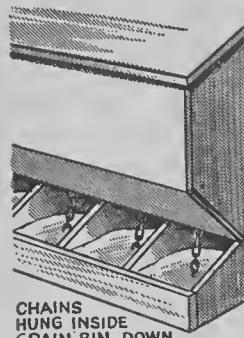
Some suggestions for the do-it-yourself farmer, which can save time and money

Cutting Tapers. Tapers of various degrees can be cut quickly and accurately on your saw table with the help of this adjustable jig. It consists of two 30-inch 1 x 4's hinged together, and a slotted metal bracket fastened



to one of the pieces of wood. The angle of the jig is adjusted by loosening a large-headed woodscrew, which engages the slotted metal bracket, and then tightening up the screw again to hold it rigid. In use, you simply let the inside 1 x 4 ride against the fence on your table, while you push the work along the other arm of the jig as shown in the sketch. —H.E.F., Texas.

For self-feeder. Feed can be prevented from clogging up in a self-feeder when chains are hung from the base of the grain bin into the feeding trough. The way this works is that hogs, for example, will work the chains around while they are feeding, and this stirring keeps the grain from packing too tightly.—M.M.E., Alta.



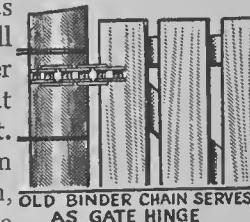
Grain binder idea. There are iron braces back and front under the lower elevator of the grain binder. When the lower canvas gets slack, the slats hook on the braces, and cause a lot of trouble. To avoid this, weld or bolt a curved plate on each brace, and the slats will slide over them instead of catching.—R.E., Man.

Door with safety cover. Look at the sketch, where you will see a door over a flight of steps. The door swings to the left, and there is always a dangerous hole in the room at the right, ready to trap the unwary, but by sawing off the base of the door and moving the hinges, the door can be made to swing into the room, and a shelf



added to the bottom covers up the hole made by the steps when the door is shut. The door can swing only through 90° now, and looks a little unsightly, but that is preferably to having broken legs.—W.F.S., N.J.

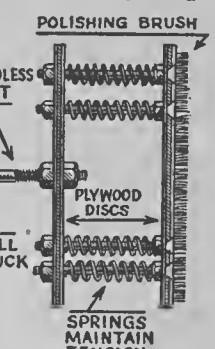
Chain hinges. Short lengths of chain can be used as hinges for small gates. Old binder chain with flat links is the best. As you can see in the illustration, you just secure the chain with nails or screws to the post and the gate as you would an ordinary hinge.—M.M.C., Que.



Tight screw. It is a troublesome thing when a screw keeps coming loose in the furniture, or other places. When this happens, I remove the screw, dip the end in glue, and screw it back in again. It then stays put. —H.S., Mich.

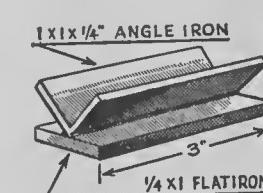
Emergency barn bracket. In an emergency, you can make a bracket in the barn or shop for supporting a scale, lantern or other light piece of equipment. Drive a nail into the wall, and hook the claw of your hammer onto it as shown. The nail should

be driven in far enough so that the hammer will stay horizontal. Then you slip the ring of the appliance over the handle of the hammer, or secure it to the handle with twine.—J.J.W., Alta.



Electric polisher. This is very helpful when polishing cars, floors, windows, etc. Take two circular pieces of plywood, about 3" or 4" diameter, and bolt them together, loaded with a spring on each bolt, and securing a brush or polishing pad to one of the pieces of plywood with the same bolts. Next, make a shank from a headless 5" bolt, securing it with two nuts to the other piece of plywood, and inserting the other end into a portable electric drill chuck.—G.E.P., Sask.

V-shape holder. For a simple way to handle round stock and pipe while drilling and clamping, try using some V's made from angle iron. For example, take 1" by 1" by $\frac{1}{4}$ " angle iron and weld it to a suitable length of $\frac{1}{4}$ " by 1" flat stock. Then use a power saw to cut it into three-inch lengths. Several of these will help you with all kinds of jobs.—M.M.E., Alta.



WHAT'S NEW



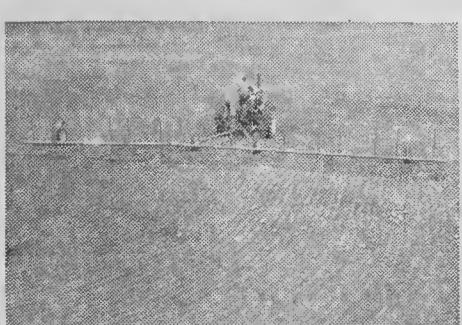
Crushing as it cuts, this new crusher-mower with smooth rollers is claimed to condition hay so thoroughly that it dries in almost half the normal time. It is pulled by a two-plow tractor, and has a single hydraulic cylinder to control the cutter bar and crusher pickup. (New Holland Machine Co.) (158) ✓



This new mounted transplanter is said to be more maneuverable than a "pull behind" machine, and is suitable for tobacco, vegetable and tree seedling transplanting. It has adjustable pack wheels, depth control, a self-cleaning water valve, and spacing from eight to 55 inches. (New Idea Co.) (159) ✓



The "Merry Mover" is a powered wheelbarrow with a 25-inch long flat bed and a 12-inch extension. Utility and concrete trays are optional. It has a steel, welded frame, finger-tip clutch and brake controls, recoil starter, pneumatic tires, and a 1,000-pound capacity unit. (Merry Manufacturing Co.) (160) ✓

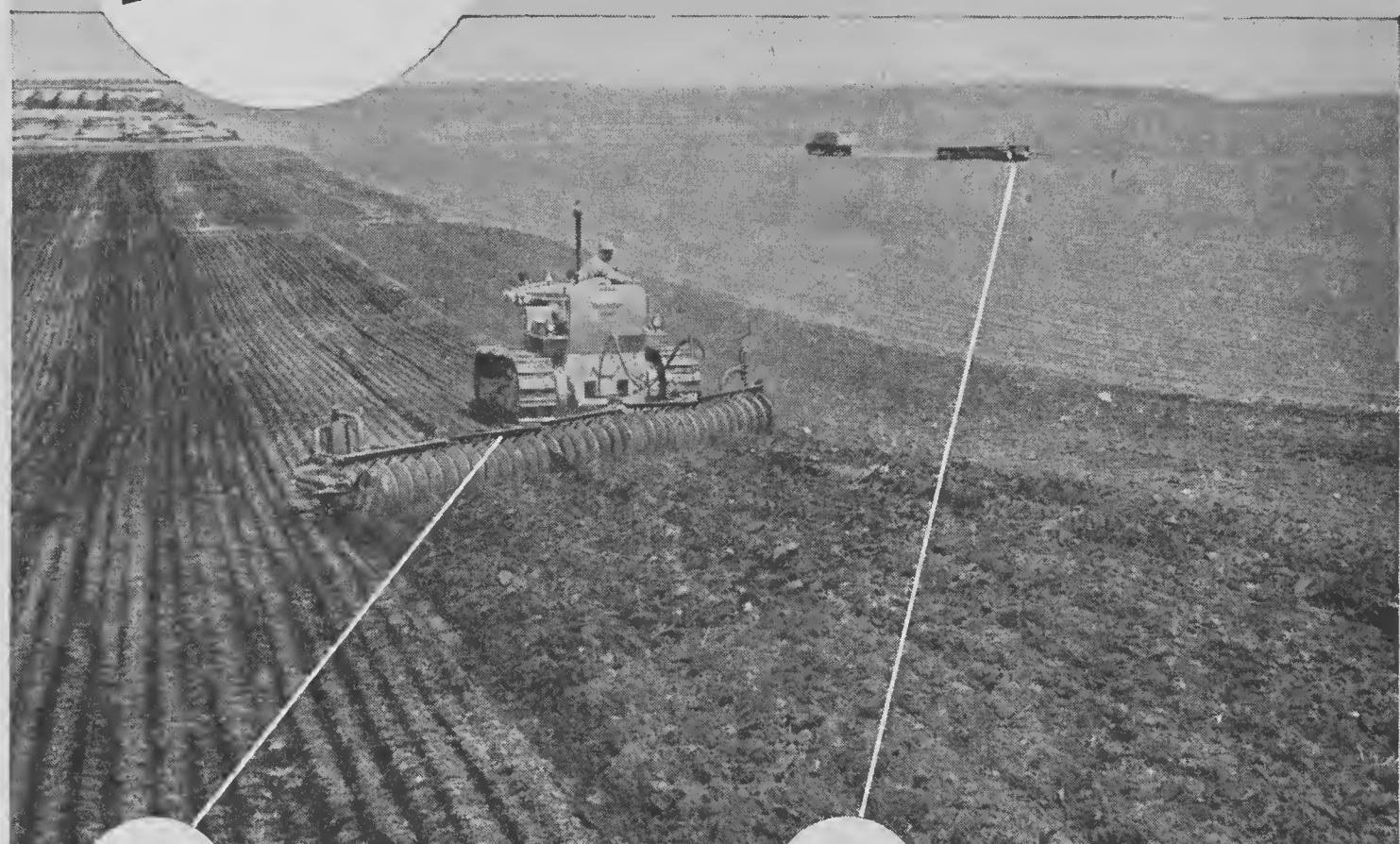


This spike-tooth harrow with rolling, folding drawbar, is 48 feet wide, can be handled by one man, and works up to 280 acres a day, it is claimed. It folds for transport without unhitching the harrow sections from drag chains. (John Deere.) (161) ✓

For further information about any item mentioned in this column, write to What's New Department, The Country Guide, 290 Vaughan St., Winnipeg 2, giving the key number shown at the end of each item, as-(17).

2 Reasons

*why George Stanko gets
more yields per acre:*



**Reason
No.1**

...his CAT* D6 Tractor

George Stanko's D6 is shown on his farm near Lethbridge, Alberta, pulling a 20' oneway, making 100 acres of seedbed per day. Sloughs and hills won't slow him down—the D6 goes right through the wet spots and up the steep inclines. And Mr. Stanko has dried out problem potholes by opening up tight soils with his D6 and 18' chisel plow. In addition, his D6 does the innumerable jobs that only a bulldozer-equipped Cat track-type Tractor can do: smooth off high spots, fill in low places, dig ponds and ditches, build roads, clear land and beautify the homestead.

**Reason
No.2**

...his CAT D4 Tractor

Mr. Stanko's D4 is shown pulling two 14' drills. The D4 has ample power and traction to pull these two units at the optimum working speed for precision drilling. Either drill, alone, would be a good load for average size farm tractors. Thus, the D4 saves time, labor and equipment.

Partially as the result of better tillage practices made possible by his Cat Diesel Tractors, 1955 flax yields increased an average of 13 bushels over 1954 yields. Mr. Stanko says, "I can't farm without a Cat Diesel Tractor. When you have hills and sloughs, you need them!"

Think of the ways Cat Diesel Tractors can help you reap better harvests: When the weather opens up, you can get on the fields sooner, and finish up faster. You can work your soil deeper, cheaper, and prepare a fine mellow seedbed that yields better. You can surface drain many problem areas, and build rich crop ground out of wasteland, wallows or bogs.

Right now's a good time to see your dealer about owning a Caterpillar Diesel Tractor. He will gladly analyze your farm power requirements, your future plans and possibilities, and recommend the tractor that will help you get the better way of life you want. See him soon!

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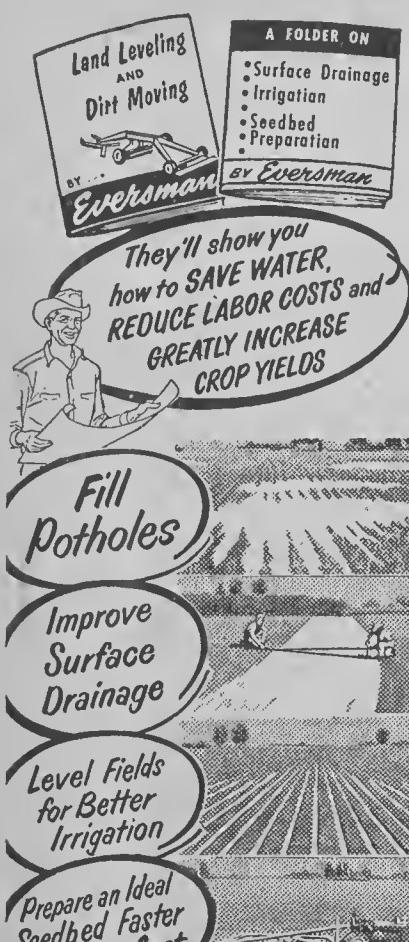
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Young People

On the farm and at home

Mrs. O. Brown, Stockton, Man., recipient of Walter S. Frazer trophy for '56.

Award For Leadership

MANITOBA makes public recognition of the devoted service of volunteer 4-H club leaders. In 1953 Walter S. Frazer, now assistant commissioner of the Board of Grain Commissioners, formerly Assistant Director, Extension Service, Manitoba Department of Agriculture, made available a trophy to be awarded annually to an outstanding club leader. In 1956, after a study of the records of some 900 leaders, the judges awarded this trophy to Mrs. Oscar Brown of Stockton, Manitoba.

When her daughter Norma joined the 4-H clothing club in 1949, Mrs. Brown was persuaded to take charge of the sewing. "I don't know why I had to be persuaded," she told us, "because the club has now become one of my greatest pleasures and satisfactions."

During the seven years Mrs. Brown was leader, Stockton clothing club had an outstanding record of achievement. In 1953 and again in 1954 it was the winner of the provincial efficiency trophy and held a place in the top ten clothing clubs, consistently, from 1949 to 1956. Three members: Margaret Rolfe, Muriel Sutherland and Roma Poole have won grand aggregate awards at rallies and Gayle McLachlan has represented the club at National Club Week. (Gayle is now attending school in Winnipeg and acting as junior leader to the Kirkfield Park Club.) Miss Shelagh Rowlette, district home economist, reports that Stockton club has always had a high per cent of red and purple ribbons, and does well in parade and judging competitions and demonstrations. This club is also a consistent winner of displays at local and inter-district rallies at Brandon and Portage la Prairie fairs. Their team of Orma Jeffries and Patsy Dodds last year won the Martinson shield for their demonstration "Accent on Color."

Each year the club holds a church service to which surrounding clubs are invited. Recently their church parade was shown on Station CKX-TV. Another interesting project undertaken

was a display of dolls beautifully dressed by the girls and later donated to the Crippled Children's Hospital in Winnipeg. In citizenship service, Stockton members each year act as collectors for the Canadian Institute for the Blind. Three girls have represented the club in public speaking competitions in Winnipeg.

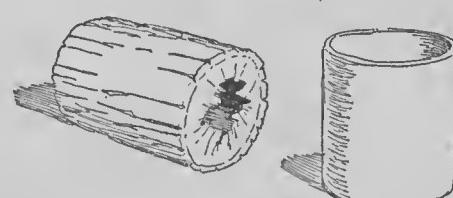
Mrs. Brown has served on the Manitoba 4-H Council for three years, one year as president. She has turned over club leadership to Mrs. James Graham but continues to act as demonstration leader. With her husband she shares the work of a large farm of which 500 acres are given over to crops. Her son Kenneth, resides in Dauphin and Norma is taking Grade XII there. Wcsley farms near his parents. The Browns' attractive home on the banks of the Assiniboine offers that friendly hospitality for which western farm women are noted. Besides her club work Mrs. Brown is active in the Rebekah Lodge and plays the church organ at Stockton.

"The record of the club of which I am proudest," she says, "is that I have never had any difficulty with girls not completing projects. This award is due to the fine co-operation of the girls who belong to our club, encouragement given by their parents, and the devoted help given me by my husband."

On the Down Beat

FOLK songs of the West Indies, known as Calypso music, have become very popular with music lovers. You have probably heard this rhythmic music on radio or TV or you may own Calypso recordings. The natives of the islands beat out a slow irregular 1-2-3; 1-2-3; 1-2 rhythm on homemade drums called "bongos," while a singer strumming a guitar relates the news of the day in singing rhyme. The music of wandering minstrels in mediaeval times was similar to Calypso music.

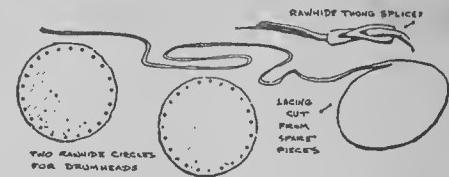
You have materials on the farm to make a fine bongo drum to accompany many types of music—a piece of hollow log and one or two raw skins of calf or deer. You need a straight, unbroken section of log, about two feet long and one foot thick. Trim off the bark and make the outside smooth, then using chisel or gouge hollow out the inside leaving a shell with sides about one-half inch thick. The log must be perfectly smooth inside and out.



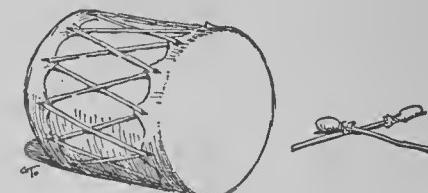
Now for the skins! If the skins are hard and dry, they must first be soaked to soften them. Dump some wood ashes in a large wooden tub, fill with water and stir. Immerse the skins and leave to soak for two or three days

until the hair can be scraped off easily. Then wash the skins in soapy warm water to clear off the grease and scrape them on both sides with a blunt knife.

The lacing is made by cutting the skin round and round in a circle until you get about 60 feet of lacing about three-quarters of an inch wide. Twist, roll and stretch this until it is nearly round. For the drum heads cut



out two circular pieces of the hide allowing three inches overlap all around the drum log end. Now lay the two pieces of skin flat one on top of the other and with the sharp point of a knife make a series of holes through each skin one inch from the edge and two inches apart. Put one skin flat on the ground and set the drum log on it and the other skin on the top. Bind them together with the lacing, running it from hole No. 1 on the top to No. 2 on the bottom as shown in the diagram. Go twice round until every hole has a lace through it and the crossing laces will form a diamond pattern. Lace loosely, then tighten up when once around. Draw both drum heads tight when completing the lacing.



You will find the sound very soft at first but hang the drum up to dry for a few days—you will hear it creaking and straining as it tightens. The sound which your homemade bongo produces should be the joy of a Calypso fan or an Indian warrior. Practise various rhythms—3-4, 2-4 and the irregular beat of Calypso music tapping them out with your hands or make a drumstick of wood and lash some cloth around the end to soften the sound.

Social Evening Honors Seed Team

WARREN SIGURDSON, Cypress River, and Ken Sparrow, Elgin, members of the 4-H seed club team that represented Manitoba at National Club Week, were honored at a banquet and social evening held at Cypress River. Russel Yeo, president of the seed club, acted as chairman. Special guests included John Forsythe and Keith Smith, agricultural representatives at Souris and Holland. Mr. Ed Somers, Extension Service, Manitoba Department of Agriculture, outlined the excellent club record held by Warren and Ken and emphasized the importance of parents' interest as well as leader and club member co-operation in building a strong club. A film on National Club Week was shown, after which Warren and Ken gave their impressions of the coveted trip to Toronto.

Following the banquet a program of skits and musical items was presented by members of Cypress River district. A dance wound up the evening.

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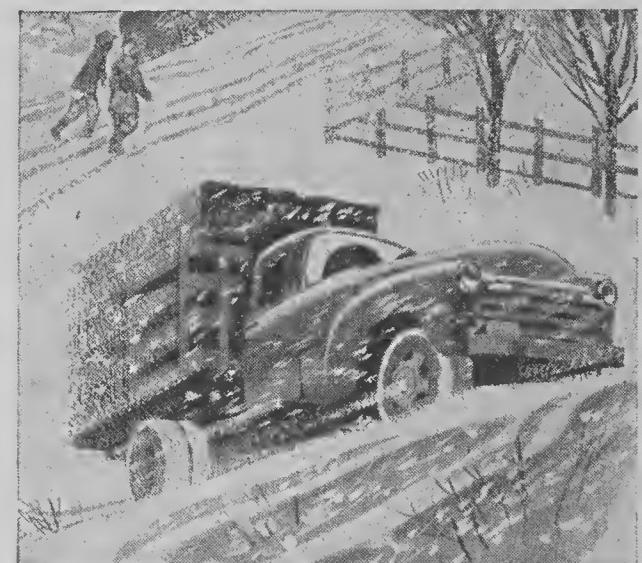
2. GREATER ECONOMY

Replace misfiring, gas-wasting plugs with new full-firing Champions for greater economy. Powerfire electrode delivers peak performance for full plug life.



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Misfiring plugs drip raw gas that dilutes and weakens protective engine oil. Install a set of new full-firing Champion Spark Plugs to help prevent costly engine repairs.



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Tests prove that replacing worn plugs with new Champions gives 9 out of 10 cars more horsepower instantly, delivers maximum power in all engines.

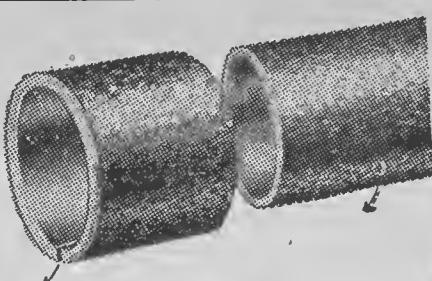
Are the engines that help lighten your work doing their best for you? Not if they are crippled by worn, misfiring spark plugs! Replacing old plugs with new 5-rib Champions can give you easier starting, greater gasoline economy, increased oil protection, and more useful horsepower in all your farm engines.

If a check shows worn or badly fouled plugs in any engine, replace them with a set of new Champion Spark Plugs. You'll get more help at lower cost when you do.

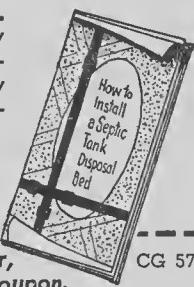


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Do you gasp for breath with asthma, wheeze and cough with chronic bronchitis or sneeze and blow with hay fever? Then read what Mr. W. J. A. MacKenzie, 266 Jarvis St., Toronto, has to say: "I suffered from asthma, hay fever and chronic bronchitis, with sneezing and frequent attacks of coughing. Often I had bouts of sneezing, watery eyes and itchiness in eyes and ears. It was a fortunate thing when I learned of Templeton's RAZ-MAH.

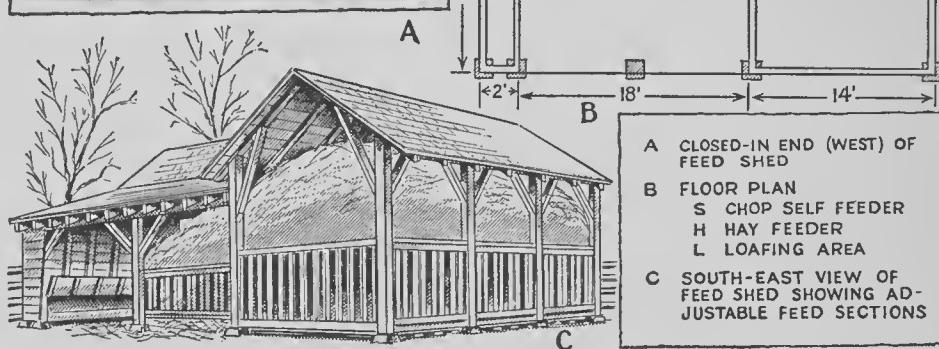
From the very first I found satisfactory relief from my symptoms." Discover for yourself how much RAZ-MAH can do for bronchial asthma and hay fever. Only 79¢ and \$1.50 at drug counters. For stubborn cases: RAZ-MAH SPECIALS—easy on sensitive stomachs. R-138



Feed Sheds Make Life Easier

New system keeps his cattle in good shape and means less work for Peace River farmer

by HARVEY ANDERSEN

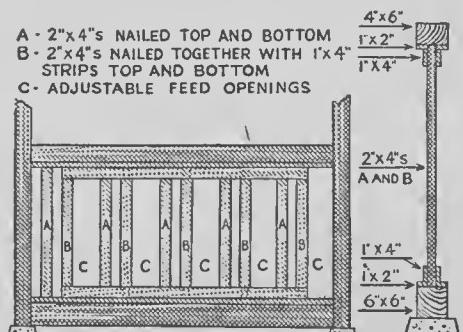


This is the new feed shed and corral built by the author. Note the simplicity of self-feeders, which makes chores lighter, and the compact design.

We are located on a farm in the Peace River country of north-western Alberta, and are able to keep our cattle outside continuously. Even during last winter, which was said to be the coldest in 75 years, they came through in good condition. This has been accomplished with a minimum of effort, owing to a feed shed design, which is revolutionary compared to the old type, in as much as it eliminates most of the chores.

It is over four years since I built the first feed shed. I made it in an L-shape, with the space for feed in two sections, measuring 17 feet wide by 66½ feet long on the outside of the L, and 50 by 50 feet on the inside of the L. It holds approximately 60 tons of hay. The roof is supported by 6 by 6-inch pillars, set 10 feet apart on cement blocks, and between these are feed stanchions consisting of 2 by 4's set 11 inches apart.

Originally, the 2 by 4's were seven inches apart, allowing the cattle to get only their noses between them, but this resulted in waste as they pulled the feed out, and I increased the openings to 11 inches. They still pull a little out at the beginning of the season, but as soon as they are able to get their heads inside, they don't waste a single straw. They can reach in about three feet, and for the first month or so, depending on the number of cattle, they need no help. When they have cleaned up all they can reach, there is a feed alley inside the panels, and the hay is then fed from the top of the stack—once a day being sufficient.



The five feed openings in a section can be varied from 6½ to 13 inches.

The lean-to on the inside covers a loafing area of 12 by 80 feet. The manure is allowed to build up there, supplemented with straw for bedding, and is not removed until the spring.

The spacing of the feed stanchions at the south side of the shed is still seven inches. This panel is removed when additional feed is required, and a hay stack (on skids) is brought up with a crawler tractor, and pushed in under the roof. It can be fed from the stack.

An improvement which could be made is to build a lean-to on the north side and board it right down to the ground. This would provide shelter during the latter part of the winter, when the feed pile has dwindled and cannot give sufficient protection from the north wind. It would also provide an extra loafing area of 12 by 66 feet.

This first feed shed proved so satisfactory that I have built another one on the same principle, but with several improvements. This is the one shown in the illustration and drawings.

The new shed is enclosed in a corral, where the calves and young steers go at weaning time. The yearling heifers are put out in spring at about the time when the mature cows start to drop their calves, and the herd sire is put in with the steers, and confined there until July. The corral encloses a small part of a lake, so there is plenty of water for the stock in winter and summer.

This feed shed has a capacity of 16 tons of hay and about 100 bushels of chop. The sliding panels (see illustration) are a great improvement, especially for vaccination, because they are adjustable. While the calves are feeding, the section can be pulled tight to their necks and a wider wedge is slipped between the 2 by 4's. So there they are, lined up in a neat row, without exciting them in the least.

High Quality P.E. Island Hogs



[Guide photo]
These hogs are the result of twenty years of P.E. Island hog improvement.

ONE of the most remarkable transitions in the history of livestock has taken place with hogs on Prince Edward Island. The province has shown the way to Canadian swine producers who are faced with the need to produce lean bacon hogs to retain their industry.

From 1922, when Canada began selling its hogs on a graded basis, Island breeders have been trying to improve their pigs. In 1934, they got a hog-testing station at Charlottetown. Later, the province decreed that all boars sold for breeding purposes must be out of dams qualifying in Advanced Registry. By 1941, with 31 per cent of Canada's hog carcasses grading A, the Island's program was beginning to pay off, and their own hogs averaged 35 per cent Grade A.

In the succeeding 15 years, the Island's hog business hasn't looked back. Now, with Canada well below 30 per cent in A-Grade hog carcasses, the Island is almost double that.

BREEDERS like Almon Boswell and J. B. Stewart have taken their breeding stock to the swine shows at Amherst and Truro in Nova Scotia to win championships. They have gone all the way to the Royal Winter Fair in Toronto with carcasses and swept the board. They have shipped breeding stock to the other Atlantic provinces, to Quebec and Ontario, and right out to the prairie provinces.

By buying grain shipped from prairie fields, skimming the milk from their herds and feeding it to pigs, and above all, by applying the dual yardstick to performance-testing and the practiced eye, Island hog men have bred and fed the kind of hogs that the swine industry is calling for today.

A key figure in the rise of the Island Yorkshire has been H. W. Clay, at Charlottetown, senior livestock fieldman, Production Service, Canada Department of Agriculture. This bespectacled civil servant has brought all the zeal of an aspiring politician to his work there. Visiting him at his office, The Country Guide found him far from satisfied with the 60 per cent A-Grade hogs that Island producers are sending to market. He pointed to one test showing that 75 per cent of the Island's hogs would dress out Grade A carcasses if they were marketed at the correct weights. He had statistics from the Island test station

to show that 92.8 per cent of the sows tested there qualified in 1955.

Mr. Clay maintains a precise record in his office of the top breeding animals on the Island. He leafed through it, pointing out that of the 125 boars in use in the province, nearly all are out of sows scoring 85 or better under A.R.

He stopped at one sow whose ancestry was as well documented as that of a royal family, to show that her seven nearest dams had all scored 85, or better, under A.R.

He turned to the records of a particularly promising young boar. Three

of his litter from different herds, had scored 94, 90, and 87 on test. Feed conversion and growth were good in all cases.

The owner, he said, planned to mate this boar back to some of his own daughters to be sure that no ruptures, ridglings, or other deformities showed up, before making wider use of him. If he came out well, that boar was marked for wider use.

Island hogs have advanced so far now that further improvement will be made only if the greatest care and wisdom is used by breeders. Swine

improvement is taken so seriously that at the Charlottetown Exhibition, boars cannot be brought out unless they are from qualified dams; nor can sows over two and one-half years old be exhibited if they haven't qualified under A.R.

These breeders of Canada's old Island province can't boast elaborate buildings, but their pigs are becoming renowned. Like the grain growers in western Canada, they must meet the challenge of markets that are distant. They are doing it with quality hogs. V

Lilly

FEEDLOT INTERVIEW WITH HENRY A. LONGMEYER, GREENFIELD, ILLINOIS

Longmeyer likes to use at least 2 pounds of protein supplement per head daily. "I do it because my gains are better that way. I've tried to cut down

but don't have much luck. Gains fall off and cost of gain goes up." About 'Stilbosol,' Longmeyer says, "I don't think a man can afford not to feed it."

Sons give dad tip-off on 'Stilbosol'



Overhead bins store the grain which flows by gravity directly into the feed wagon at a pull on a lever. Longmeyer uses a hammer mill to grind his own corn and cob meal, which is then blown into an overhead bin.



Mr. Longmeyer has already fed 2000 cattle 'Stilbosol'-fortified supplement. On one group of 187 head, he got an average daily gain of 3.2 pounds (pay weight to pay weight) at a cost of 19.3¢ per pound of gain.



"The things I look for from my feed manufacturer are a quality feed plus help on new developments—and they do a good job of delivering both to me." Henry and his feed manufacturer's representative, Joe Powell, (right) look over Longmeyer's high-gallonage watering tank.

(Canadian distributor: Charles Albert Smith, Ltd., 356 Eastern Avenue, Toronto 8, Ontario)

ELI LILLY AND COMPANY (CANADA) LIMITED, TORONTO, ONTARIO

Veteran cattle feeder adds new gain-booster to other modern cost-cutting practices for "best daily gains I ever had."

by Eugene S. Hahnel

Search for information is a constant state of mind for Henry Longmeyer, who farms 700 productive acres near Greenfield, Illinois.

Typical of Henry is the way he pumped his college student sons, Ralph and Albert, for every possible piece of news on the latest money-making, cost-cutting practices.

When his boys told him about successful experiments with 'Stilbosol'-fortified supplements, Henry put in his order... long before such supplements were available. When the first shipment arrived from his feed manufacturer, Longmeyer didn't hesitate to feed it to all his cattle. "I couldn't afford a check lot because of the gains I've been getting with 'Stilbosol,'" was Henry's profit-conscious comment.

'Stilbosol' is Eli Lilly and Company's trademark for Diethylstilbestrol Premix which is manufactured and sold under exclusive license granted by Iowa State College Research Foundation, Inc., under its U.S. Patent No. 2751303.





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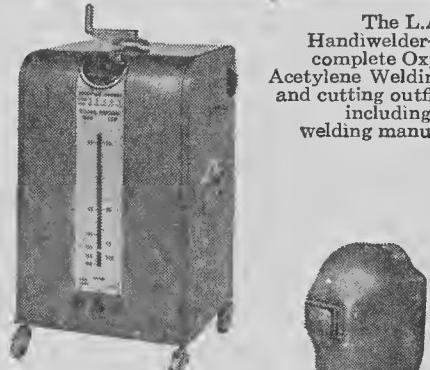
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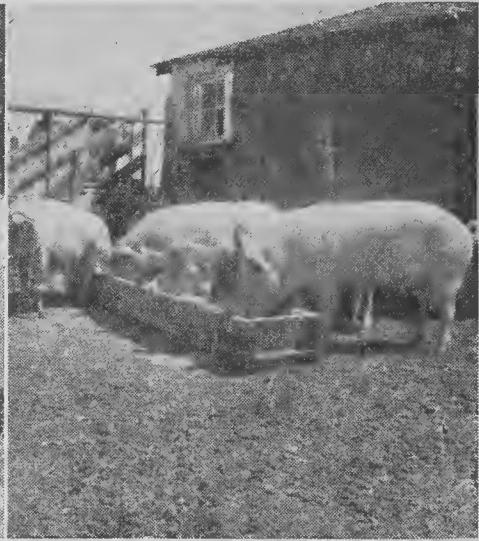
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Good Grades With Large Hog Output

Culling, careful feeding and cleanliness enable John Porter and his sons to maintain quality



[Guide photos]

Left, Ray Dennis (manager) and Delbert Quinn take a look at one of the litters on the maternity farm. Right, six-month-old gilts out in the pastures.

HOW can you ship more than 100 hogs a month and average 60 to 70 per cent Grade A? John Porter, and his sons, Charles and Jim, seem to have found the answer. It is a combination of strict culling, flexible feeding to suit the varied needs of litters, and efficient management.

They have three adjacent farms at McTaggart, Sask., devoted to Yorkshire hog breeding. One is a maternity farm, and the other two are where the pigs go shortly after weaning to be grown and finished for market. There are 105 sows, producing 15 to 20 litters a month, and the Porters plan to increase their breeding stock to give an output of 40 litters monthly.

The sows are mainly of their own breeding, with purchases of sows and boars from time to time to bring in new blood. They are also experimenting on a limited scale with the introduction of a few Tamworth sows, to see if they can improve such factors as milk yield and rate of gain.

The weaning period is from five to eight weeks normally, depending on the size of litters, but weaning is sooner if a sow is short of milk. About 70 young pigs a year have to be weaned from birth, when litters are too big, and the majority of these come through. An average litter of ten is preferred. One sow had 20 last winter, raised ten of them, and five of the remainder survived. The sows are rested from three days to two months after weaning, depending on the shape they are in.

Feeding includes pig booster meal for weaning, with pellets for those weaned from birth. The young pigs also have powdered sow's milk with the booster, if they need it. Milk replacer has been used for new-born pigs, but has not worked too well. If unthrifty, the young pigs get a vitamin mixture containing an antibiotic.

Creep feeding is usually introduced at two weeks old, starting on booster, hulled oats and rolled oats, or whatever they will take. They are also given iron, when three days old.

The sows are given a balanced concentrate, on pasture, but none for two weeks after they are brought in to farrow, because it seems to scour

the young pigs. The sows and gilts get alfalfa meal at other times; and also in the barns if it agrees with the young pigs.

Litters are vaccinated for enteritis in the first week, for swine plague in the second, and for enteritis again before they are weaned. Erysipelas vaccination is given shortly after weaning, but before they go to the growing and finishing farms. At these farms they are fed pig starter mixed with chop, and are then changed to a utility concentrate, with a ration of oats, wheat and barley, which are mostly home-grown.

The growing hogs are still kept in barns, but with access to outside pens when the weather is suitable. They are never allowed in the pastures, but are fed sods in summer, and when possible in winter. They also have minerals. Usually, they hit the desired weight of 190 to 210 pounds at five to seven months. Shorter hogs are shipped a little sooner, because they would never make Grade A.

The Porters have been told that their hogs are readily recognized in the stockyards because they are so clean. This is due to hygienic rearing in barns that are furnace heated and have fan ventilation. Heat lamps are used for a few days per litter in summer, and for about two weeks in winter.

Strict culling is one of the keys to quality production. All hogs are tattooed, and their grades are reported back from the stockyards, so that a check can be kept on the performance of sows. If grading is unsatisfactory,

Economic distress will teach men, if anything can, that realities are less dangerous than fancies; that factfinding is more effective than faultfinding.—Carl Lotus Becker.

the sow is culled. Each sow is also watched for its milk yield, for its behavior in the pen, in case it should injure the young pigs, as well as for rate of gain and for such other details as size of snout, which is considered to be important in guarding against rhinitis. The results of all this care are evident on the quality of the pigs sent to market.

v



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Good Seed Is Worth More

Continued from page 13

market for grass and clover seed, which should continue to improve.

Eastern Canada has long provided a market for seeds grown in western Canada. This will continue to be true so long as suitable kinds and varieties are available at fair prices. Also, the United States and Europe compete for many kinds of seed from all parts of Canada. At the same time, Canada imports many kinds of seed from these and other countries. The exchange of seed between different countries depends upon suitability of kind or variety and price delivered.

Since there are superior named varieties of most kinds of seed, the improvement of crops depends largely upon more general use of these varieties which have been recorded, graded and guaranteed as to trueness of variety. All seeds which are tagged and sealed as of "Registered" or "Certified" grade, are true to variety. The Canadian Forage Seed Project undertakes to propagate superior varieties of forage crop seed of these grades and to promote their sale. The federal and provincial departments of agriculture, the Canadian Seed Growers' Association and the seed trade are co-operating in developing this national policy. This is a counterpart of the Federal Forage Seed Project, which has been very effective in the United States. These similar projects, as now operated, have already done much for crop improvement and have been the means of increased trade in named variety or pedigreed seed between the two countries.

The new soil bank policy in the United States should improve the market for Canadian grass and clover seed in that country. For example, brome grass yielded below average in both countries this year, with the result that the American demand forced the price of brome up to a near record level. In this case the scarcity of brome grass seed also strengthened the value of other grass seed. Climax, a superior Canadian variety of timothy, is in strong demand in the United States.

PRODUCTION of registered and certified seed of wheat, barley and flax has exceeded domestic demand in recent years. Farmers recognize the merits of new varieties and the advantage of starting with pedigreed seed, but efforts to persuade them to



The germination testing service is available to all farmers. For the seed grower, it has an important bearing on the ultimate grade of his samples.

purchase sufficient registered seed to cover 100 to 200 acres have been only partially successful. It is difficult, for those whose granaries contain a considerable portion of last year's crop, to see economy in purchasing a sizable quantity of registered seed, at a premium of upward of a dollar per bushel over the value of their own grain. The Canadian Seed Growers' Association, provincial crop improvement associations, the seed trade and grain-handling organizations, nevertheless, continue in every way to promote the sale of registered seed and thereby improve crop returns.

Membership in the Canadian Seed Growers' Association has increased year by year to a point where it taxes the capacity of the Plant Products Division to provide the necessary field crop inspection and seed inspection services. The quantity of seed produced has often been in excess of domestic demand, particularly in the case of wheat. This has led, unfortunately, to competition and price cutting on the export market.

THE principal export market for seed of cereals and flax is the United States. Farmers in both countries are interested in new varieties, and there has been a liberal exchange of varieties produced on either side of the international boundary. Farmers in the United States have an incentive to purchase registered seed wheat from Canada because of the higher price they receive for their commercial wheat. Supplies of pedigreed wheat have been so heavy that this spread between the Canadian and United States prices for milling wheat represents about all the premium that United States dealers are offering for Canadian registered or certified seed. This is not sufficient to pay the costs incurred by legitimate growers of registered seed.

Then why do they sell? The reason is that many of the new members of the Canadian Seed Growers' Association are not seed growers at heart. They are ordinary farmers who have joined the Canadian Seed Growers' Association to produce seed at the least possible cost, which they are prepared to sell outside of the Canadian Wheat Board quota, at low prices, for ready cash. This is little short of dumping, and it works a serious hardship on the professional growers of pedigreed seed in Canada and the United States. A number of seed growers in the United States have protested to their governments and to officers of the Canadian Seed Growers'

[C.D.A. photo]

Association, about this unfair competition.

Seed growers should ask a fair price for their seed to cover the extra cost of production over the cost of producing commercial grain, plus a reasonable profit. Some of the expenses incurred by Registered seed growers are as follows:

(1) Increased cost of Foundation Stocks, Elite Stocks or Registered Seed (above the cost of commercial seed) used in planting; (2) Cost of following C.S.G.A. Rules and Regulations and keeping records; (3) Loss of crop from 10-foot isolation strips between cereal varieties, and cost of keeping these free of all growth; (4) Weed control; (5) Roguing, or hand picking, to remove "off-types," other crop plants and weeds difficult to separate by seed-cleaning machinery; (6) Investment in adequate storage space and seed-cleaning machinery or payment for seed-cleaning service; (7) Precautions to be taken with all machinery used, to avoid mixtures of kinds and varieties; (8) Payment of C.S.G.A. assessment for services, and of fees for crop inspection, seed testing, seed inspection and grading; (9) Loss in cleaning to a uniform registered grade; (10) Advertising, correspondence, or travel, necessary to market the crop. Seed growers who do not recover the above expenses will not remain long in the seed business.

Most important when selling seed is to produce a grade of desirable quality. High germination, freedom from noxious weed seeds, reasonable freedom from common weed seeds, other kinds of crop seeds and inert matter, uniform plumpness and attractive appearance are the qualities required in top grades of seed. All seed growers should become conversant with the grade standards, the labelling requirements and other regulations established under The Seeds Act. This Act is administered by the Plant Products Division, Canada Department of Agriculture, with district offices and seed testing laboratories in eight districts.

PREVIOUS to seeking a market for seed, growers should submit a representative sample to the Plant Products Division for a germination test and analysis. The analysis required will depend on the kind of seed, and whether the seed is uncleared as it came from the threshing machine, or has been cleaned for a seed grade. For uncleared grass seed, a germination test, a percentage-of-pure-seed test and a listing of noxious weed content, provides information necessary to the seller and the prospective buyer. Uncleared seed of cereal crops usually requires only a germination test. The germination has a bearing on the ultimate grade and the percentage-pure-seed gives an indication of the probable loss in cleaning. If the seed has been cleaned by the grower, it should be tested for germination, purity (the number of primary noxious, secondary noxious, other weed seeds, and other crop seeds per ounce or per pound), and grade.

These tests will be of little value unless the sample is thoroughly representative of the entire stock. It is recommended that the sample be drawn from ten places at several levels in a bin of loose grain, or from the



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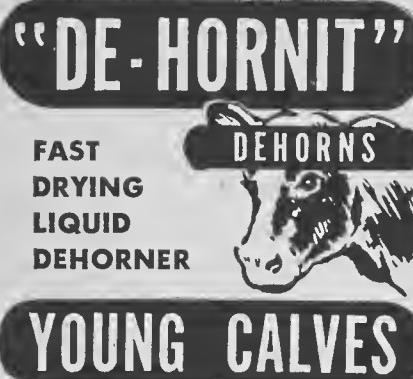
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first ten bags, and every tenth bag thereafter, in a bagged lot of seed. A large sample taken in this way should be mixed well, by pouring from one pail to another, then divided into smaller samples of a size for mailing to the Plant Products Division, and to prospective seed buyers. It is advisable to withhold correspondence with seed dealers, until a sample can be provided, accompanied by a copy of the report of analysis and germination. This report or "Control Sample Certificate" helps to establish the value of the seed. One condition attached to the use of a "Control Sample Certificate" is that all seed delivered must be equal to the sample submitted for analysis.

Many kinds of seed remain dormant for a period, after which the vitality or germination improves. For that reason it is advisable to allow seed to after-ripen for a few weeks before submitting a sample for test. Seed should be watched carefully as to condition and keeping quality. If the seed has been harvested with excess moisture, it may deteriorate in storage, due to heating, or development of molds. This may necessitate turning the seed

over, spreading it thinly to dry, fanning and cleaning, or even artificial drying. It is best to harvest in a manner which will avoid this complication and risk of loss.

PRODUCERS have several ways to market seed. They may sell to a growers' co-operative, or to any of the wholesale seed companies. These are large establishments, which compete for seed in all producing areas, and are equipped to handle the most difficult seed-cleaning problems. They prefer to receive seed in the rough, or semi-cleaned condition, and keep their own machines in operation. Much of their business is in carlot and truck-load quantities. Prices to the grower are usually established on the basis of net cleaned seed, subject to grade.

An alternative to the above procedure is for growers to sell to smaller local dealers, or "primary cleaners." These purchase seed as from the threshing machine, subject to actual dockage, or estimated dockage and grade when cleaned. They handle principally bag lots and truck lots, but occasionally car lots. A few of these receive seed from growers for process-

ing and sale on consignment. Many act as agents for wholesale seed houses. Some act as agents for seed brokers who do not own processing equipment.

Forage crop seeds cleaned at "primary cleaning plants" usually require to be re-cleaned at a more completely equipped plant to make the registered grades. However, many primary cleaning plants can clean seeds of cereal crops to the Registered and Certified grades. A number of these plants have been established in recent years to serve the exporters of registered and certified seed wheat.

Many well-established seed growers, particularly the older members of the Canadian Seed Growers' Association, have their own seed-cleaning machinery. Besides disposing of the bulk of their crop to the seed trade, these growers have an important outlet to farmers in their neighborhood. The high freight rate on seed encourages farmers to make a saving by looking to nearby growers, or local seed dealers, for their seed grain.

The grower's main handicap in marketing forage crop seed is lack of information as to its value at shipping point, or delivered at the primary market. Farmers are acquainted with daily market quotations on grain, livestock, poultry and dairy products, but no similar information is available to them on agricultural seeds. However, crop reports are published seasonally, which indicate the condition of forage crops, and forecast yields, which, together with statistics on export, domestic consumption and carryover, are factors in establishing the prices for seed of the new crop. Supply and demand at home and abroad finally govern the price of seed from the producer through to the consumer. Crop losses due to unfavorable climatic conditions cause sudden changes in the supply and the price.

The seed trade keeps in touch with the seed situation and market values, by constant correspondence, telephone and telegraphic communications, and frequent personal contacts with each other. Competition within the seed trade usually results in fair prices to producers. Seed growers are, in fact, dependent on their co-operative organizations and the seed companies to successfully market the bulk of the seed crop—skillfully and at fair prices, in line with their best knowledge of current values. V



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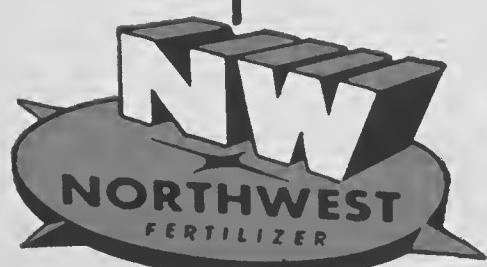
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Irrigation Paid Off Here

This mixed farm got a strong lift from irrigation of a special cash crop



[Guide photo
With the aid of this 75 h.p. engine and irrigation in a dry season, this family sold \$9,000 worth of turnips and paid for the equipment the first year.

EVERY horse racing fan dreams of the one big payoff that will make him rich. It seldom materializes, but here is an instance where a carefully calculated farm investment paid off substantially in a single year. Better still, the investment should continue to pay off on a more modest scale for years to come.

Oliver Leslie and his sons, Ron and Murray, farm at Freclton, in Wellington county. They found a market for all the good turnips they could grow, and upped their acreage to nearly 30. Germination proved to be a major problem. Dry weather often meant an uneven start, and consequently, uneven-sized turnips at digging time.

They couldn't afford to lose their open-quota market, so Ron and Murray investigated and finally bought a \$5,000 set-up for irrigation in 1956. Along came the driest summer in years, and without that ready water supply, Mr. Leslie figures they would have done well to sell \$3,000 worth of the roots. After irrigating, they harvested 720 bushels per acre from 31 acres, sold well over \$9,000 worth of turnips, and had the irrigation set-up paid for in the first year. Now they have it working on more acres than ever.

The Leslies had to dig their own ponds to provide the water, and their first, dug into a shale and gravel seam was gouged out 120' by 60' and can't be pumped dry. Their second pond, now only 100' by 40', has not found as good a source of water, but will be expanded, and they hope will provide sufficient water.

The system selected by the Leslies is powered by a 75-h.p. engine. It will pump 450 gallons per minute, and cover 3½ acres with a half-inch of water per hour. Cost of running it is estimated at about \$30 to \$40 per acre per year.

TURNIPS can be seeded with a precision planter that drops seed about 1½ inches apart. These are later thinned to six or eight inches, because the market requires a five-inch root. Half a ton of 0-12-20 fertilizer per acre

is used, three-quarters of it as a side dressing for the rows, and the remainder, along with aldrin and borax, broadcast on the field. Turnips are grown with a hay rotation, and since the Leslies grow corn and feed cattle and hogs, they have manure as well.

Turnips are dug, beginning about mid-September, and are stored in the cow stable, while the cows run outside. They are shipped by truck to Washington, D.C., and New York cities, from then until mid-January.

Now the Leslies are trying early potatoes as another cash crop. They are buying western steers for winter and spring feeding; and feeder pigs, when the price is right, for self-feeding the corn. In fact, they fed pigs corn on the cob, and 40 per cent swine concentrate free choice, last summer, and turned a neat profit, because of low feed costs and a rising hog market. V

Poison Your Cattle

by DON J. MACLEOD

IN the cattle business, almost any means, however startling, is justified if the result is of benefit to the industry.

Dairymen and those interested in beef cattle only, are conversant with one of their many enemies, known as the cattle grub. This parasite, it is estimated, costs the livestock industry in North America approximately one hundred million dollars a year in meat, hide and milk losses. Anything that will put a stop to this devastating loss, however drastic, is worth considering.

Until now, the most popular method of fighting cattle grub has been the use of rotenone. The only trouble with rotenone is that it is something like locking the barn door after the cattle have been stolen, as the grub is not killed until after it has bored its way through the hide.

Last year, packers in the United States Middlewest, trimmed away approximately \$8 worth of meat from the

loins and ribs of cattle when they removed damage done by the cattle grub. Grubs usually are seven months in the animal before they are checked.

A new treatment for cattle grub has been announced. It is called ET-57. It is a poison which is given to cattle systemically to prevent the development of grub. It is an organic phosphate similar in some respects to some of the chemicals presently in use such as aldrin and lindane. The trouble with the latter chemicals is that they do not prevent grub emergence.

The new ET-57, however, moves through the animal's body, and wherever it comes in contact with grub, it is destroyed. The new system is still in the experimental stage, and is not yet recommended for general use. The reason for this is that it has yet to be determined whether it has any harmful effects on the cattle. It also has to be determined whether there may possibly be any chemical residue left in the milk, or the meat, that might be harmful to the consumer. ✓

Big Meadow Maintains Jerseys



Guide photo
Lloyd Spencer and one of his Jersey herd, which average 10,000 lbs. milk.

NORTHEAST of High Prairie, Alberta, lies the Big Meadow, a full township of wild hay land near Grouard Mission at the eastern end of Lesser Slave Lake. In normal seasons, the meadow produces up to 5,000 tons of hay (red top) for stockmen in the surrounding area, but the excessive rainfall of the past five years has raised the water table so high that the annual harvest has been reduced to about 500 tons, for which stockmen pay the Government a levy of 50 cents a ton.

One of the best known of these is Lloyd Spencer of Big Meadow Jersey Farm. Lloyd, or Bud, as his friends call him, has one of three R.O.P. herds in the Peace River country, and has done much to popularize the Jersey breed in northern Alberta. Bud sponsored a shipment of 29 head of Jersey heifers, which arrived at High Prairie from Bella Vista Farms, Milner, B.C. All were R.O.P. animals, representing some of the best blood lines found on the Pacific Coast. They went to 14 purchasers in the High Prairie area, and played a big part in dairy herd improvement there.

The Spencer farm comprises 160 acres, about 130 acres of which is under cultivation at the present time. This consists of 30 acres in hay and pasture (brome - alfalfa - fescue mixture), and 100 acres of barley and

oats. Additional roughage comes from the Big Meadow.

In all, there are 17 Jerseys in the Spencer herd, six of them milking cows. The total milk production is now sold to near-by Grouard Mission, but before obtaining this contract, Bud used to ship as far as Westlock 50 miles northwest of Edmonton. In those days the mailman picked the milk up at the farm and delivered it to the nearest rail shipping point.

In conjunction with his dairy enterprise, Bud has been raising a few Yorkshire hogs, but he intended to sell these and increase the number of Jerseys. A new barn is planned for

next summer to take care of the larger herd, but like many purebred men, Spencer prefers to build a regular stanchion barn instead of the more modern loose-housing type.

"In a stanchion barn you can line them up so they show to best advantage," he smiled. "Loose housing units are too mechanical to suit me. I like to look my animals over one by one, and maybe pat them a little."

Since the Spencer herd went on R.O.P., Bud's milking cows have averaged 10,000 pounds of milk and 537 pounds of butterfat per year. One cow, "Big Meadow Gift's Report 229326" was twice named a Silver

Medal cow, and issued a "Ton of Gold" certificate. Another, "Rockview Ringleader's Bonnie" won two silver medals, two gold medals, and one Medal of Merit. Classified as "excellent," she also won a "Ton of Gold" certificate for producing 2,032 pounds of butterfat in three lactations (1,031 days). In addition to this, Spencer entries took three awards at the Edmonton Exhibition this year.

Through his purchase of quality stock, Bud has brought top Jersey breeding to the High Prairie district, and demonstrated that the Jersey is able to thrive under Peace River conditions. ✓

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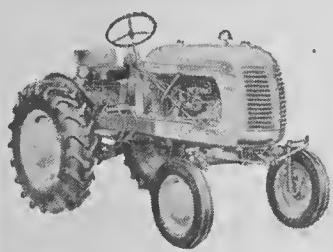
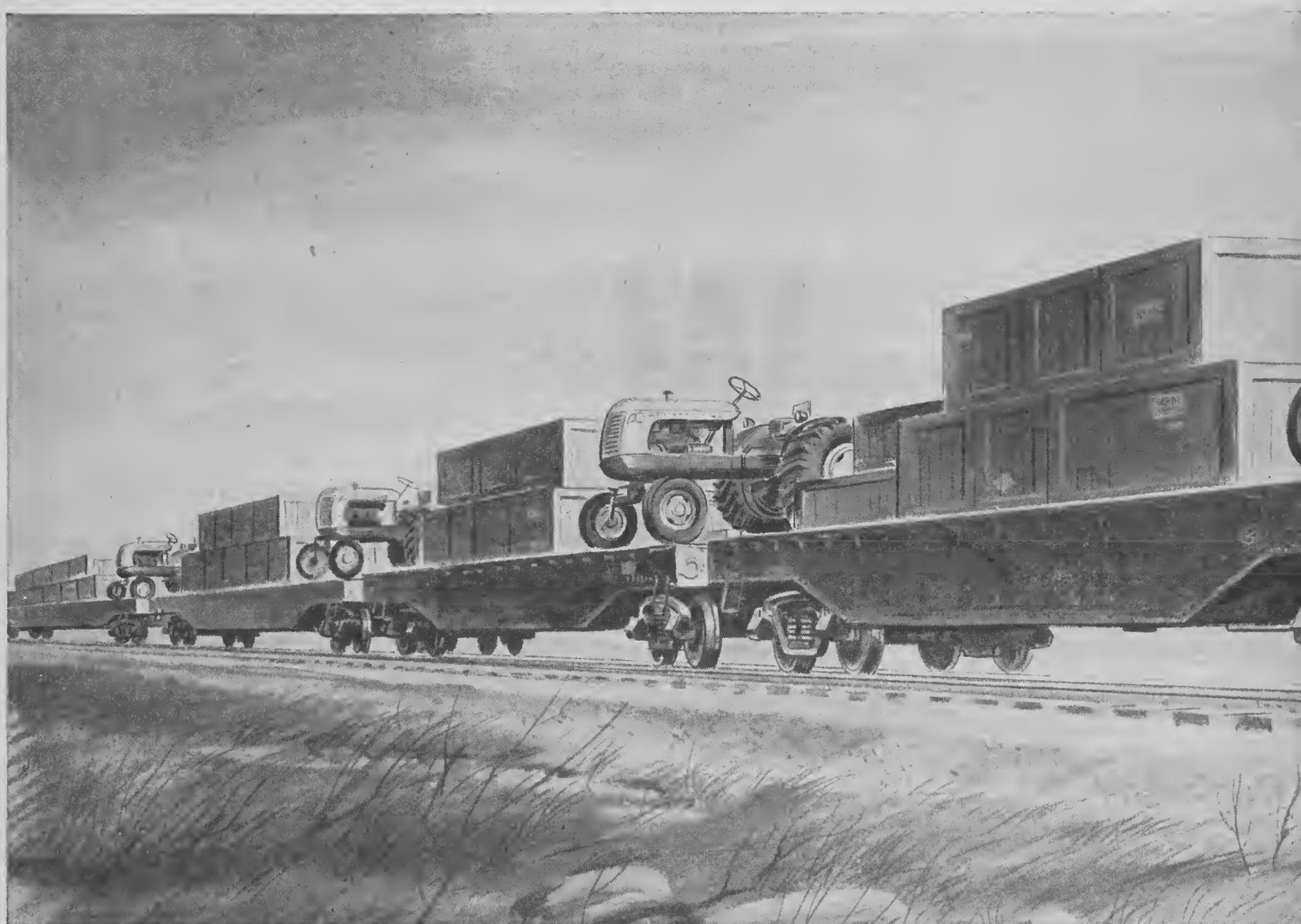
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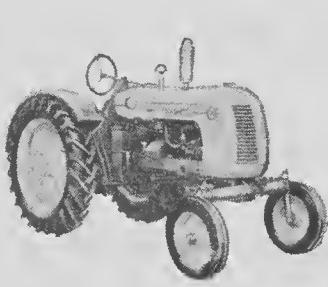
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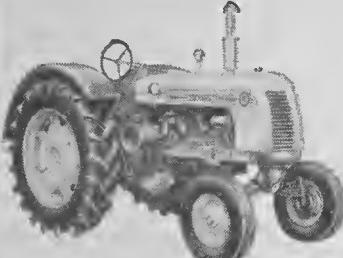
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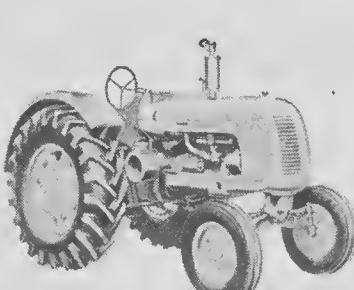
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This Cockshutt "50" is shown at work at the Cockshutt factory. (Note: When empty, a single flat car weighs about 65,500 pounds.) This is a big model—and it handles such chores as this as a matter of course.

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T-126

Science And the Farm

Virus infections in man, plants, and animals may eventually be controlled by chemical treatment. Two scientists at the University of California have been able, for the first time, to bring about known inheritance (genetic) changes in the chemical structures of viruses by way of mutations (sports). They have found the rate at which such changes can be made is the highest ever achieved by any means, and that the viruses so changed produce similarly changed offspring. By applying these findings, scientists may eventually be able to turn deadly viruses into harmless ones. ✓

Honey bees share the same food and smell alike. These characteristics may not seem important to the average person, but they are of utmost significance in the life of a bee colony. Dr. Ronald Ribbands of Cambridge University, England, has found that a single sample of nectar brought home by a forager bee, makes the rounds of the entire bee colony. It is passed from honey bee to honey bee irrespective of age or occupation, until upwards of 50,000 offspring from a queen bee have shared a stomachful. Sharing the same menu also results in sharing the same smell. The odor is considered to be a "scent language," that is the basis of the bee's extremely complex social life. It is also distinctive, and enables the members of the colony to recognize each other. The honey bees use this odor differentiation as a burglar alarm and password, thereby protecting their hive and food against bees from another colony. ✓

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Risks in cheese manufacturing may be reduced considerably as the result of research work conducted by scientists at the British firm of Fisons, Limited. They have been able to develop a phage-resistant medium for growing cheese starter cultures. Phages are organisms that attack and destroy the acid-producing bacteria in cultures. When this happens the cultures are rendered useless and, if used, can result in heavy losses of product. Since phages are always present in cheese factories they represent a constant threat to success in cheese-making. With the new medium, starter cultures may be grown in spite of the heaviest phage contamination. It is estimated that the discovery may lead to a saving of between 30,000 and 100,000 tons of cheese in the main producing countries in a single year. ✓

Flowers that bloom rarely, or not at all, have been made to blossom. By applying a new hormone-like substance called gibberellic acid, Dr. Anton Lang of the University of California, Los Angeles, has been able for the first time to consistently promote flowering in a considerable number of plants. Experiments were initially carried out on water pimpernel, carrots, sweet william, henbane and catchfly. Gibberellic acid caused stems to shoot up immediately, and two or three months later the plants would flower, while untreated plants remained stemless or non-blooming. It is suggested that the substance may become of commercial importance due to its ability to hasten blooming. ✓

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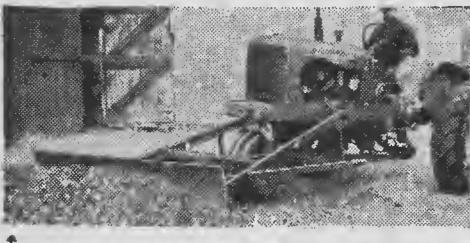
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Fergus Landrace Swine Farm
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Look Dad! No Hands!

Continued from page 11

and bulk tank." The bulk tank was almost a necessity to get a milk contract.

The system left plenty of room to expand the herd later, without adding more buildings. He has a four-unit parlor now, and has bought a herd of 60 Holsteins. Because they are purebreds, he has put them on the Class B, R.O.P. test division.

This means that once a month the milk is weighed. He has milking machines for this purpose (pipelines require them for fresh cows, infected udders, and other troubles), and it slows down chore-time only once a month.

"Adequate systems don't come cheap. But look what I can do with it. I'm betting my future on dairying," he told us. "I can produce roughage on my 230 acres, and buy most of the grain required. Then, if things go well, I may build to a 100-cow herd some day."

The system did another good turn for Grant, too. Hans Harms, whom he knew was a reliable man, came to work for him, when he got his herd.

"I like Grant," Hans explained, "and I have wanted to work in one of these set-ups."

Here is what it has done for the Eby farm.

Milking 60 cows isn't a big job now. In the evening, for instance, Hans begins chores at 5 p.m. and works until 6, while Grant is eating supper. Then Grant relieves him. "Chores are done, and we have both eaten by 7 p.m. each night," Hans explained. That sort of thing helps bring dairying into step with other industries today.

DOWN in eastern Ontario, 50 milking cows mean only two hours' chore-time morning and night, for Howard Robinson and his wife at Pembroke, because he combined a pipeline milking system, with loose-housing. That kind of efficiency is their answer to today's low-margin farming. This meant a sizable investment. It also gave full scope to the vigorous imagination this big and high-powered farmer brings to agriculture.

When he sold his farm on the edge of Pembroke, to industry, he invested in another farm nearby, and began planning a big enough dairy enterprise that he could look forward in earnest to that early retirement he has promised his wife. He has a vigorous style of farming, but he doesn't want to spend all his life at it.

Now he has a gigantic pole barn 180' by 70'. The baled hay is stored along the back of this, but he has found that the cows prefer to eat outside, so he plans to build a shelter in which to store hay in the barnyard.

He has a five-stall, single-row milking parlor, a direct-line milking system, and an automatic cleaning and rinsing system for the machines and pipes. Here is where he saves time. He figures, too, that with this equipment he has accommodation to double the herd without additional buildings. Once he gets squared away after

building his 50-cow herd, he'll begin shooting for the 100, too.

Like George Cardinal, his entire barnyard is concreted, and he has a horizontal silo for easier feeding.

EVERY installation of pipeline milkers has not been so successful. The pipeline idea was developed on the big dairy farms in the U.S., where several hundred cows can be found in single herds. Early systems failed for lack of an adequate method of cleaning the pipes, while they were in place. They had to be dismantled for a thorough job and, sooner or later, owners began to cut corners. Pipes became dirty, bacteria count of the milk went sky-high, and the system was blamed. These limitations are largely overcome with some of the new systems, but the pipelines represent another force compelling farmers to increase the size of their businesses.

One manufacturer, who is installing most of the systems being bought by Canadian dairymen, doesn't recommend them for farms with less than 30 cows. "In a few years," he added, "dairy farmers may require 50 or 60 cows to keep competitive."

Once systems are correctly installed, cleanliness is the big factor in their successful operation. Prof. A. G. Leggatt of the O.A.C. Dairy Department says that pipelines can be cleaned thoroughly in place, if the correct method is used, "But try to cut corners and you're in for trouble."

"Keep a sharp eye on joints and stopcocks, to see that no dirt accumulates. Wash out releasers and traps, and weigh jars regularly," is his advice. He can mention several cases where sloppy cleaning methods ruined the milk going through the pipes. "That carelessness was costly, too, for high-bacteria milk will be turned back by the dairy."

Everett Biggs says that bacteria counts have gone up to nearly a million, with some installations that were not kept clean. One company that is installing the pipeline systems says: "We test the water on each farm, then lay out a program of sanitation for it. If the owners follow it through, they won't have any trouble. But they must live up to the recommendations. That's the cheapest insurance they can get for high-quality milk."

Prof. Leggatt had the same idea in mind when he said: "A good dairy farmer can do a better job with pipelines. A poor dairyman may have even more trouble than before, if he installs them."



"I suppose being a country doctor has its advantages at times."

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Annual Meeting of The Royal Bank of Canada

**James Muir questions if
Canada developing her
human resources as effectively
as her natural resources**

**Effective control of inflation may not be
possible without broader central
bank powers**

The "depressed occupational status" of Canadian teachers, in churches, schools and universities, and the dangers posed by our apparent neglect of those responsible for the training and building of the moral character of our youth were emphasized by James Muir, Chairman and President of the Royal Bank of Canada, in his address at the bank's annual meeting in Montreal on Thursday, January 10th.

CRISIS IN EDUCATION

"The present economic position of the teaching profession is an anomaly. The economic position of all teachers has deteriorated relative to other professions of comparable training and responsibility, and relative to the working force as a whole. Thus the teacher today finds himself in the same occupational 'depressed area' which he occupied as long ago as 1776. Here then is a case where the allocation of our human resources would seem to be unresponsive to the ordinary operation of the price mechanism. But this is only partly true. In fact, the supply of teachers is likely over a period of time to be only too responsive to the price mechanism; the market will work only too well and we shall lose much of what is best in our educational practice through the spread of too small a staff over too many courses and students, and through the deterioration of the staff itself."

"We as citizens must, through government, business, or individual action ensure that our schools and universities are provided with sources of funds sufficient to attract, to retain and to replenish those human resources of talent, training and experience that teaching requires."

INFLATION STILL THREAT

The continuing threat of inflationary pressure, some of them from new and unexpected quarters, was also emphasized by Mr. Muir, who expressed the view that it might be necessary to enlarge the powers of the central bank if we were to keep under full control the forces which threatened the integrity of our money. "Consumer credit continues to expand, but consumer credit directly or indirectly financed by banks fell off significantly in 1956. For example, personal loans by chartered banks fell off during the second half of the year, while similar loans by loan companies and credit unions continued in 1956 the rising trend established in 1955. Retail consumer credit by instalment finance companies rose through 1956 to a new high, while chartered bank loans to instalment finance companies fell steadily during the second half of the year." Despite the effective measures already taken, Mr. Muir felt that there were at least two sources of inflationary pressure which the Central Bank, with its present powers, would find it difficult to reach (see box). "It would appear," concluded Mr. Muir, "that in order to be fair and achieve the best results, our monetary and credit control may have to embrace a wider area of our financial world than it now does."

CAN PRESENT CURBS HALT INFLATION?

"There are at least two sources of inflationary pressure which the central bank, with its present powers, will find it difficult to reach," said Mr. Muir.

"First, it is possible, even with no increase in the money supply, to increase the activity of that supply by putting otherwise idle funds into the hands of spenders through the ordinary devices provided by the capital market.

"Second, it is possible, with no increase in the money supply, to increase the funds available to businessmen and consumers from sources other than the financial institutions ordinarily controlled by our monetary authorities.

"It would seem to be at least open to doubt whether the present facilities and techniques available to our monetary authorities are sufficiently wide in scope to deal with present-day problems of credit control. It may be taking too positive a view of a distant scene, but it would at least appear that, in order to be fair and in order to achieve the best results, our monetary and credit control may have to embrace a wider area of our financial world than it now does."

Total Deposits have now passed \$3½ billion mark

K. M. Sedgewick, General Manager, noted that not only had the assets of the Royal Bank reached the imposing total of \$3,571,298,320 but that deposits had passed the \$3½ billion mark, both new high points in Canadian banking history.

"While our loan policy during the year was a restrictive one," said Mr. Sedgewick, "in line with our agreement with the Bank of Canada, yet the buoyancy of our economy demanded that we accommodate many deserving clients with new or increased lines of credit. For this reason, the commercial loans of the bank increased by \$126,000,000 or just over 10%." The bank's liquid position, he pointed out, continued strong, total quick assets of \$1,958,263,058 representing 57.86% of the bank's liabilities to the public.

"In spite of lower balances in Government accounts of some \$45,000,000," said Mr. Sedgewick, "deposits of the bank increased by approximately \$216,000,000. The number of our depositors grows steadily and we receive much satisfaction in realizing the high percentage of the country's population who deal with us."

Mr. Sedgewick discussed the bank's extensive building and renovation programme, and mentioned that branches and sub-branches operating in Canada numbered 797, while those abroad totalled 75.

Egg Laying Contest at Storrs

by ALEX M. STEWART

NOW in its 44th consecutive year, the international egg laying contest at Storrs, Conn., is regarded as the outstanding contest of its kind. More than any other event, it has brought master breeders and their strains of poultry before the public. Its scope is international. It was at Storrs that Tom Barron of Catforth, England, demonstrated his strain of White Leghorns to be far ahead of their time in egg production, and many other breeders have established world records with their different breeds there, under the supervision of the poultry department of the University of Connecticut.

Standards are high, and it is considered an honor to be among the first 20 in the competition. Rhode Island Reds have been dominant, having won ten times in the past 16 years. The winning pen for 1956 was bred by C. T. Avery and Son of Colrain, Mass., scoring 3,867 eggs for 4,095 points in 50 weeks. Reds had the highest average of 240 eggs from 286 birds, and the lowest mortality, seven per cent. Crossed with Barred Rocks, they produced the champion hen out of the 1,300-bird entry, and five out of the six high crossbred pens.

In second place, a crossbred pen, White Leghorn x White Wyandotte, made a world record for crossbreds of 3,736 eggs and 4,053 points. The breeder was Harvey Taylor of Cedar Lake, Ind.

The summarized results were as follows:

Breed	Entry	Mortality	Eggs	Points
White Leghorn	416	12.74%	236	246
White Rock	104	7.69%	198	209
Barred Rock	104	9.62%	232	243
Rhode Island Red	286	7.34%	240	254
Crossbred	338	13.31%	227	239
New Hampshire	52	15.38%	212	218

U-Hook Unloader



A U-hook made from two and one-half-inch pipe with a few steel rings welded on, makes it easy to load and unload heavy equipment from deep within the recesses of panel-body trucks and station wagons used on the farm. Weld a piece of steel at the curve to serve as a guide handle.—Harry J. Miller. ✓

Still Flows the River

Continued from page 12

trail behind, and play in the sun on a hilltop where she could keep us in sight.

It seemed to me Mama was never done her fuel gathering, or picking wild berries that grew in profusion along the cutbanks. Busy as she was she often found time to croon old lullabies or tell us stories of her childhood as she kneaded the dough or worked around the house. These stories were about Grandpa and Grandma McLeod, and the brothers and sisters whom she never expected to see again, so remote from Red River did our home now seem.

She spoke of the old home as if it were a sweet remembered dream. I never heard her complain, but when she began to get homesick she would tell us instead of the laughing young French-Canadian voyageur who had won her heart, and how for her sake had left his beloved river journeying to plow the hills that overlooked the river.

If Papa ever yearned for the care-free companions, the rush of the rapids or the quiet ripple of the stream against a canoe, we never knew. His violin would sob or sing as it revealed a story, his lips would not tell, a story as old as the river that wound its way through the lonely reaches of the prairie, through dark woodlands and silent swamps.

FOR me the days were always beautiful, but looking back I can recognize them as days of continual toil for Mama and Papa. The life of the pioneers was never easy. Mama found the dugout cramped and airless, and few as our possessions were they seemed too many for the narrow quarters.

Papa vowed that the first day he had time he would dig her another room, just like the badgers. He promised before long she would have a fine new house of logs. Mama only smiled and said she didn't mind being a cavewoman, at least the Indians couldn't burn it down about her ears, and it would be warm for winter.

But Mama almost lost heart the morning she woke to a shower of dirt in her bed. She screamed, and jumped up. "Andre, the roof's caving in! Andre, Andre, wake up, quick! Get the children out!"

Papa turned over and looked up. There were the cow's four feet hanging down over the bed, held only by the stout poles of the roof.

Papa laughed and laughed. "I knew she was a friendly cow. Now she wants to come right into bed with us!"

Mama stamped her bare feet. "I'm living with no cow, friendly or otherwise! Get her out of there, this minute! Just look at this mess. How will I ever, ever get it cleaned up!" For once she seemed near to tears, only her Scotch temper preventing that ignominy.

Bessie, the cow, began to bawl and struggle. The more she struggled the more dirt showered down to add to

AN IMPORTANT ANNOUNCEMENT TO WESTERN FARMERS

THE COMPANY takes pleasure in advising its thousands of Shareholders and Customers of its appointment as distributor in Western Canada for the complete line of Fertilizers now being produced at the new plant of Northwest Nitro-Chemicals Limited at Medicine Hat, Alberta.



AIR PICTURE of NEW 22 MILLION DOLLAR N-W PLANT



Pictured above is the completed plant built at a cost of some \$22,000,000 on the outskirts of Medicine Hat. It is designed to produce two basic types of fertilizers, Ammonium Phosphates and Ammonium Nitrate.

Fertilizers analyzing 11-48-0 and 16-20-0, of the type which have been in use on the prairies for years, will be produced. These two products will be in Pelleted form, uniform in size for drilling with the seed, and dusted to assure free flowing characteristics. In addition, two other fertilizers will be available —33.5-0-0, ammonium nitrate (nitro cubes), and ammonium nitrate phosphate —27-14-0.

U.G.G. participated in this epoch-making development, having delivered to its elevator at Red Deer, Alta., **the first carload produced and shipped for Prairie use.**

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Northwest Fertilizers for easy use and handling will be packaged in the popular 50-lb. sack. Also available, on request, in 80- and 100-lb. sacks.

United Grain Growers Ltd.

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WHAT SIXTY YEARS OF CROP PRODUCTION DOES TO THE SOIL

Sixty years of intensive crop production has taken a heavy toll of our western soil. Some idea of what has happened and why may be gained from a study of the following table.

Average Amounts of Major Fertilizer Nutrients Removed by Crops

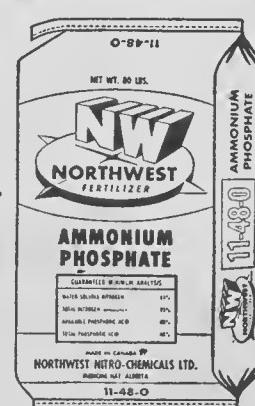
Crop	Yield	Part of Crop	Ibs. Nitrogen	Ibs. Phosphate	Ibs. Potash
Wheat	30 bu. 1 1/4 tons	grain straw	35 15	16 4	19 21
Oats	50 bu. 1 1/4 tons 40 bu.	grain straw grain	35 15 35	15 5 15	10 35 10
Barley	1 ton	straw	15	5	30
Potatoes	300 bu.	tubers	65	25	115
Sugar Beets	15 tons	roots	55	22	33
Alfalfa	3 tons	all	140	35	135
Sweet Clover	3 tons	all	111	27	99

(Taken from "Better Crops with Plant Food")

A proportion of this loss is returned to the soil by various crop residues, but the loss, particularly of essential nitrogen and phosphates, is still very large. It is estimated, furthermore, that 50% to 70% of the nitrogen and 20% to 30% of the phosphorus added by application of fertilizer is used up the first crop after application. As will be clearly seen, a PROGRAM of fertilizer application is necessary to take care of the annual loss sustained.

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ALL FORMULATIONS ARE AVAILABLE

the mess. Amid Mama's scolding, Papa hurried into his clothes and rushed out to see what he could do for Bessie. With the aid of the oxen pulling, the cow finally regained firm footing, and Papa soothed her. "Poor Bessie, you'll probably give sour milk for a month after this, won't you now?"

Mama fussed. "Don't worry about her feelings, after all, she's just a cow! You'll just have to tie her better so she doesn't get loose again. Suppose she'd broken right through. Then where would we have been? Right under her, that's where!"

"Never mind, Mama! never mind! I'll build a fence around the roof and you won't have to worry. You'll even have a balcony, just like rich folks. Soon you'll be wanting a parlor too, eh, Mama?"

Mama smiled, "You're a caution, Andre! What would you do with a parlor? You're more at home in the bush or on the river. How I ever tamed you to live in a house I'll never know. Now you talk of a parlor! Come along, breakfast is getting cold. I declare, I never saw such a man!"

"A good thing, Mama! A good thing, for if there'd been another man

like me I'd have had a harder time to win my Margaret!" He squeezed Mama's arm, tickled Picre under the chin, and tweaked my braids and then sat in to breakfast. In time Mama's balcony became for me a fort, or sometimes a lookout as I watched for Indians.

SUMMER passed and the glorious days of Indian summer painted the hillsides with color, each day the sun rose later and set earlier. Mama redoubled her fuel gathering activities and Papa took the oxen to snake in a supply of wood from the poplar bluffs

and the bush land. That first winter in our new home promised to be a long cold one. They must be ready for it. With the first fall of snow, Mama was content, for she felt their labors had been successful. We were well supplied with fuel for the months ahead.

When winter settled in earnest, Papa spent the long evenings with us in the dugout, playing his violin, filling the small room with wild, sweet music, coaxing wonderful sounds forth with his bow, and tapping his toe until Mama would put down her knitting and whirl about the room in a gay Highland Fling, her shawl flying, her magnificent hair swirling about her shoulders as she danced. Never will I forget the happiness of that time, my sweet, red-haired mother, the dark, laughing eyes of my father, and Pierre clapping his hands in delight at the music.

Mama found a little time to teach me my letters. She said it was high time I learned to read. "We'll be sending you back to Red River to Grandpa and Grandma some day to get your schooling. We can't have you knowing nothing, like a heathen Indian! I declare, you're getting too big to be spending all your time playing. It's time you learned how to be a lady."

Papa teased her. "And why should she be a lady, Mama? Likely she'll marry a voyageur, just like her Mama did, eh?"

Now as Papa talked of his days as a voyageur, I learned history first hand. Though Papa was unschooled as most of his fellows, he had a marvelous memory and a real gift for story telling. I only regret that I was not blessed with enough foresight and understanding that I might have more fully appreciated the place we were taking in the living history of our time. We were among the forerunners of the settlers, who would one day come by the hundreds to make their homes along the river which now lay dormant beneath ice.

Though the days were short and cold, Papa was not idle. Wild game and fur-bearing animals were there for those with incentive to claim them. Even as the Indians had long reaped the rich harvest of furs, so Papa, with a pack slung across his shoulders and snowshoes on his feet, patrolled his traplines. With what the carcajou, or wolverine, didn't steal or spoil, and what the Indians didn't find, he still had a good bundle of pelts to take to Fort Edmonton. He was proud indeed of the fine bolt of cloth for Mama and the fresh store of flour and sugar he brought back in exchange. I was prouder of the gay ribbons he brought for my hair, and strutted like a peacock in my new finery until Mama scolded me for my "unseemly pride which ill became a good Christian lass." Pierre laughed and crowed over his new moccasins. Papa sat back and smiled as he puffed contentedly at his pipe.

The break-up of the river heralded the spring. Ice heaved and crashed as it slowly moved down stream, a solid pile from bank to bank. The river was full to overflowing, and giant trees, carried from the mountains and swamps to the westward, were caught and ground between the ice floes. The ice moved onward relentlessly,



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GOOD YEAR

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huge cakes rising from their fellows to crash together again in a heaving, boiling mass. We watched fearfully as the water level crept toward our dugout.

We realized too well the remorseless, unleashed power of the river the morning we saw a lone Indian horseman on the far bank, pursued by a screeching, hideously painted bevy of his enemies. He paused for a few minutes to look back at his pursuers, then, obviously decided he had more chance against the river, and forced his horse into the stream.

The horse was immediately sucked under, and we did not see it again. The Indian jumped from cake to cake, often mere seconds from disaster as the floe he had been riding heaved over just as he left it for another. As he was almost below us Papa waited with a rope to help him. His enemies across the river aimed shot after shot at him, howling imprecations and shaking their fists.

Now he was right below us, and we could see his dark features. Papa tossed him the rope, and the Indian reached for it. He almost touched it! As the ice began to heave under him he made a wild grab for the rope—and missed! The floe slowly upended and while we watched in horrified fascination, he slipped, clutching futilely at the slippery sides. He gave one last agonized glance at the shore, and then the huge cake crashed down. We saw him no more. Across the river the Indians howled in triumph, then wheeled their horses and galloped away. Mama and Papa

did not look at each other, and Pierre began to cry.

The river flowed swiftly on, carrying with it the bonds that had held it a winter prisoner. Triumphantly it rushed on toward Lake Winnipeg. Perhaps Mama followed it in thought and realized how far she was from her old home in Red River.

THE word coming from Red River with every fur brigade was far from reassuring. The Metis were becoming discontented with the Government's methods of dividing land, and feared that they should lose their lands and their homes. Having been accustomed to their own systems, they were confused and fearful when surveyors came in with stakes and instruments. The Government, far away in Upper Canada, deemed it not worth while to reassure them, in spite of warnings from those on the scene. The rumblings of discontent swelled into open trouble.

Every crisis produces a leader. There came Louis Riel to lead the Metis when Canada would not listen to the cries of her children. Riel spoke for them. That his voice was unheeded is a matter of record. Canadian blood was spilled in the uprising which followed. Riel seized control of Fort Garry, and white settlers were imprisoned.

In Alberta we were but little aware of all that was happening, but we heard enough to make everyone uneasy. While the Indians did not join in sympathy with the Metis, yet danger was ever present and the set-

tlers feared for their lives should the Indians become aroused.

Many went to the Fort at Victoria, others to Fort Edmonton and Fort Pitt, for protection. Mama put her foot down and flatly stated she would not go, though privately she set me to watching that the Indians should not come upon us without warning. She kept the gun loaded always, ready for the unexpected and unwelcome guest.

I will never forget the two grizzled old Indians, dark and forbidding, who rode up to our door one afternoon, and demanded to be fed. Papa was away, but Mama faced them squarely. She invited them to come in. "You'll have your dinner, and welcome, but not one foot, not *one foot*, I say, will you set inside my door till you put those nasty knives and things down outside and leave them there."

A look at Mama's face and at the gun by her hand must have convinced them that Mama really meant what she said. They reluctantly complied, sidling into the dugout with wary looks to either side. They sat facing the door, their backs to the wall, as they gulped the scalding tea and devoured Mama's new baked bread.

The food may have given them a brighter outlook on the world. As they sidled out again, one of them slipped a necklace of bear claws into Pierre's hand and grunted, "Him fine brave some day, big hunter. Him good boy!" I was but an insignificant girl child, a "squaw," so he did not deign to notice me. As they rode out of sight, Mama promptly took the bear claw necklace

from Pierre, who was busily stuffing it in his mouth. "Dirty, dirty thing, not for babyl" and she tossed it in the fire. Pierre cried, and cried, refusing to be consoled, until a crust of bread to chew on gave him something else to think about.

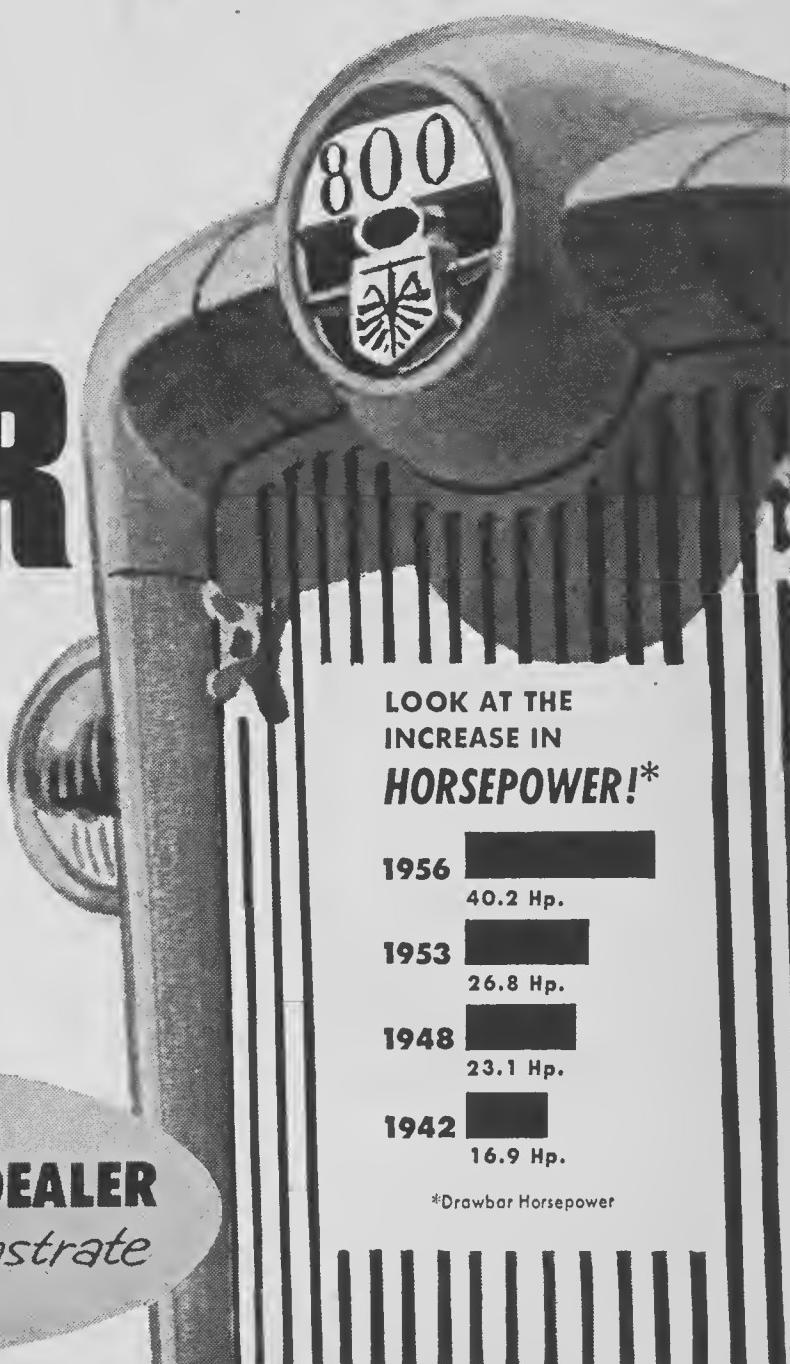
Papa took a dim view of the callers and insisted we must go to the Fort. Mama had no choice but to obey, and we left the dugout shelter under her strong protest. Though Edmonton was closer, we had heard there were Indians encamped between Fort Edmonton and our home. The Crees and Blackfoot tribes were engaged in one of their current quarrels following the murder of Maskepetoon, a great Cree Chief, and the massacre of his party. Papa thought we would be better off to go to Fort Pitt.

THAT trip over the unfamiliar trail, at times winding through dark woods or again fording streams, was exciting for me. As we drew closer to the Fort with its log walls and loopholes staring forth in all directions, with sentries on guard on the towers at the corners, I expected any minute to see hordes of Indians in war paint and feathers rising from every hollow or peering from behind every tree. The thought sent delightful shivers up and down my back. I didn't have the sense to know that there was reason enough to be frightened instead of treating it all as one grand picnic.

The Fort was dirty and confining after the broad expanse of the prairies. To Mama, particularly, it was a severe trial. Originally built to garrison but a few dozen men and stable their horses,

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it was now crammed to overflowing with the women and children from miles around, including a few half-breed families who had also crowded into the already bursting walls. The dirt and stench were almost unbearable.

Meals had to be cooked over open campfires in the courtyard. The horse stalls became beds for the assorted families. The women bickered back and forth ceaselessly, and the children squabbled and quarreled and got in everybody's way. Tempers were short, and everybody was tense as we constantly felt that the Indians were watching from the surrounding hills. We never knew at what moment the creeping danger outside would pour forth and engulf the Fort.

Mama said she felt stifled, and could not stay there any longer. Daily she begged to be allowed to go back to our dugout home above the rolling Saskatchewan and to Papa. "I'd rather take my chances with a hundred heathen Indians than spend one more night here!" she finally declared.

Her perseverance paid off. When a band of scouts was sent out to reconnoiter we were sent along to return home under their escort. Papa scolded, but without avail. Mama's Scotch stubbornness kept her adamant, so Papa had to give in.

When it was learned that there was smallpox among the Indians, and it was sweeping across the country, Papa conceded that maybe we were better off at home, away from the crowded quarters at the Fort. John McDougal, the missionary, or "Preacher John" as the Indians called him, warned everybody to keep to themselves in the hope that the smallpox could be stopped from spreading. He and his father were tireless in their work among the Indians, though some of their own family died in the epidemic. The disease wiped out whole villages of Indians.

Their tribesmen became even more resentful of the settlers for bringing the white man's sickness among them. As they blamed the white men for their misfortune and with Riel's rebels urging them to rise and strike against us, things were anything but comfortable. Papa sometimes wondered if he should have ever left Red River.

"But Andre, we don't know how things are there, either, and if the Metis have taken things over who knows what may be happening to our own people. What of Grandpa and Grandma McLeod, and my brothers and sisters? How do you suppose they are being treated? Grandpa doesn't take kindly to anyone telling him what he can or can not do. If anyone tries to order him about he's liable to have the whole lot of them down on his neck. Oh, I do wish there was some way to find out how they are."

"Don't worry, Mama," he told her. "It can't help to worry, though it's hard not to, I know. There'll be some voyageurs through before long, and they'll bring us news."

"But it's so far, Andre, so very far, even by canoe the miles between are so long, and it will be weeks before we can even hope to hear anything. Grandpa and all the rest could be massacred, and us never know!" Mama worried constantly. Often she would stop in her work and gaze eastward, across the country, as if in

thought at least, she were back in Red River. Then remembering the task at hand she would return to her work, savagely hacking at the weeds or giving the bread dough an extra vigorous kneading.

WITH everything so upset, Papa hated to leave to take part in the fall buffalo hunt, but if we were to continue eating he had no choice. He left Mama with strict warnings to keep good watch, to be always on guard against the Indians. Mama had few restful nights, and started up at the slightest sound to listen for a skulking prowler, her hand ready at the loaded gun. But the tarp at our doorway remained undisturbed.

One night the cow and calf broke loose, and were gone by morning. Mama left me to watch Pierre and she ventured out into the frosty dawn to hunt for them, wondering all the while if the Indians had come during the night and stolen the animals. I crawled into bed with Pierre and covered up my head, terrified at the idea of the Indians whom I thought might be just outside, waiting to catch Mama. They might take her away, too, and we'd never see her, ever again.

It grew later, and later, and the sun rose high in the sky. I was sure that Mama was really and truly gone. I began to squall and Pierre joined in, in sympathy, outdoing me at least in volume. Our tearful duet was at its height when Mama walked in, scolding. "Margaret, for shame! A big girl like you! You're supposed to be taking care of Pierre. Here you are scaring him half to death. Hush now! We'll have no more of that!"

"But Mama, I thought you were gone. It was so long, 'n you didn't come back, 'n I heard noises," I sobbed, "you still didn't come, and I waited, 'n waited, 'n then . . ."

"Tut, lass, Mama's here now. I found the cow down by the river in some scrub trees, with her rope all caught up in a fallen log. The calf was right with her, and it had stolen all her milk so we'll have none for breakfast."

I was so glad to see Mama that I wasn't worried about any old cow, or calf either. The calf could have the milk every morning for all of me, just so long as Mama didn't go off and leave us again. Mama tied them close by the dugout door every night, and hobbled them as well, so they couldn't get away again.

For all of our worry about Indians, we saw only one during the whole



"Grocer B" would get 66c a dozen for his sweet corn—However the poor guy that grew it would be lucky if . . ."

time Papa was away. He gave us a wide berth as he passed, fording the river far down stream instead of directly below the dugout as usual. Probably the main encampments were out on the prairie as well for the buffalo hunting, and he didn't want to meet us any more than we wanted to meet him.

AS colder weather settled in once more, the smallpox danger lessened, and once again we had visitors. News from Red River still was meagre. There were rumors that Riel had surrendered, or fled, that the rebellion had died; that the fighting still continued, until we scarcely knew what to believe. Mama questioned everybody who came, seeking news of the McLeods, but she could learn nothing, and her temper grew short with the worry of it.

Historians have recorded the story, and men have sat in judgment—but to the people most concerned the fault was not by any means all one-sided. Papa, with his French-Canadian heritage, felt a bond of sympathy with the insurgents, many of them voyageurs, too, who felt the need to be near the river, near their compatriots, and they could not understand the changes being made, nor why the Bay Company had sold their country. Papa felt they had much right on their side, but Mama thought of Grandpa and Grandma McLeod, of her brothers and sisters, and her heart was heavy.

We were at times a house divided, with Pierre and me caught in the middle, restless, unhappy and bewildered at something we could not understand—until Mama and Papa realized what was happening. They then turned to each other's arms to recapture the love that had brought them, these two of different race and culture, together to make a life and a home here in the outflung territories.

Then Papa would take down his violin, and play again the tunes we loved. The river sang by our door, and we forgot for awhile the world so far away, and even the Indians near at hand.

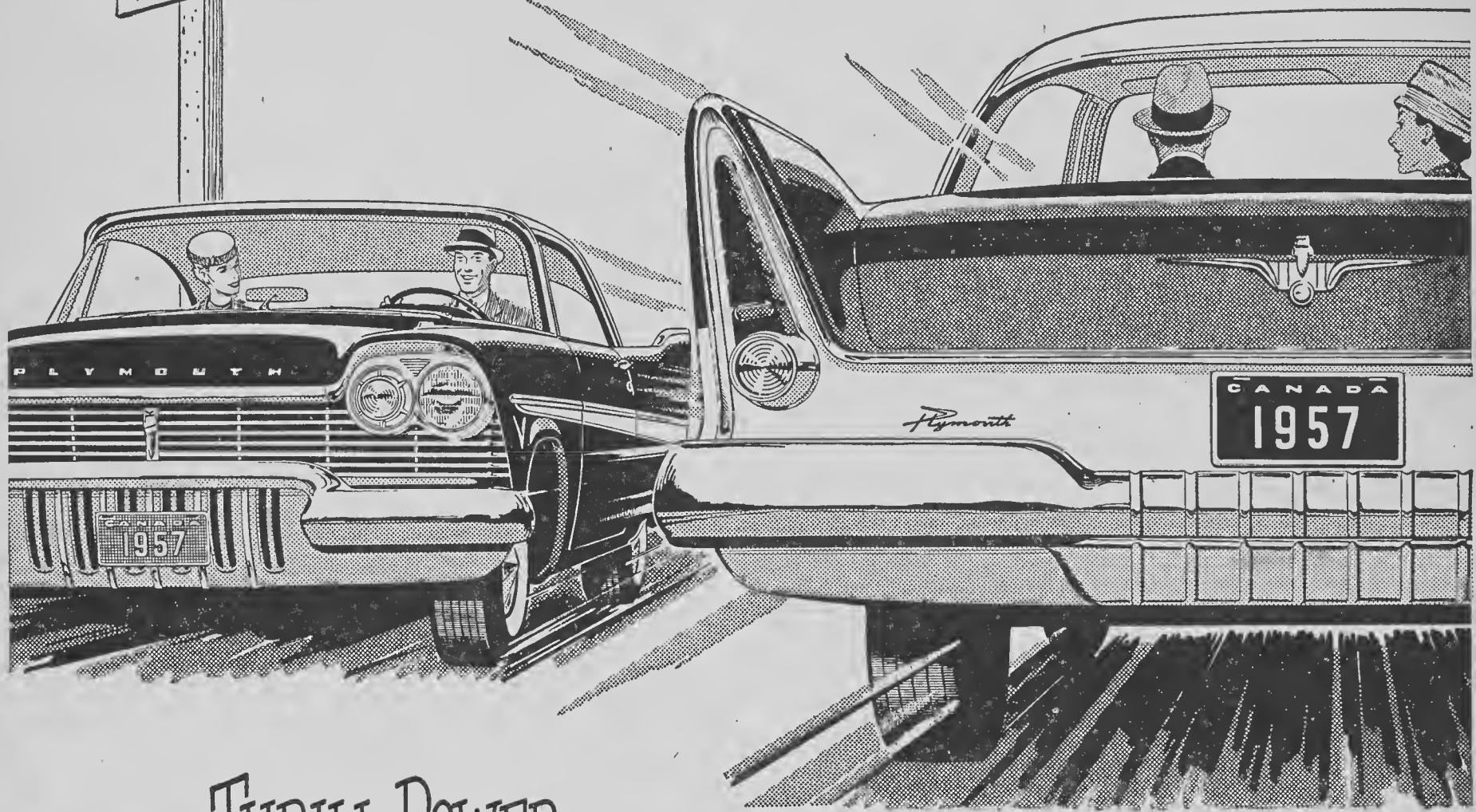
Another winter passed, and spring once again blossomed along the river and the western sky was bright with promise. Saskatoon bushes on every hill were white with blossom. The singing river flowed eastward, back to join the waters of the Red. The Indians still carried on their tribal wars with each other, but they left us alone.

Word finally came that Riel had indeed fled to the United States, had given up Fort Garry with scarcely a struggle, and the cause of the Metis must be considered lost. But for us the future was full of hope.

When a family of settlers who had found the West too much for them gave up the battle and headed back eastwards, Mama decided it was a wonderful opportunity to send me with them as far as Red River, to Grandpa and Grandma McLeod, to "get my schooling." So I said goodbye to hills and the Saskatchewan for a time.

When I returned again the dugout had been replaced by a fine house of logs on the hill, and it seemed almost forgotten—but I remembered, and I remember still.

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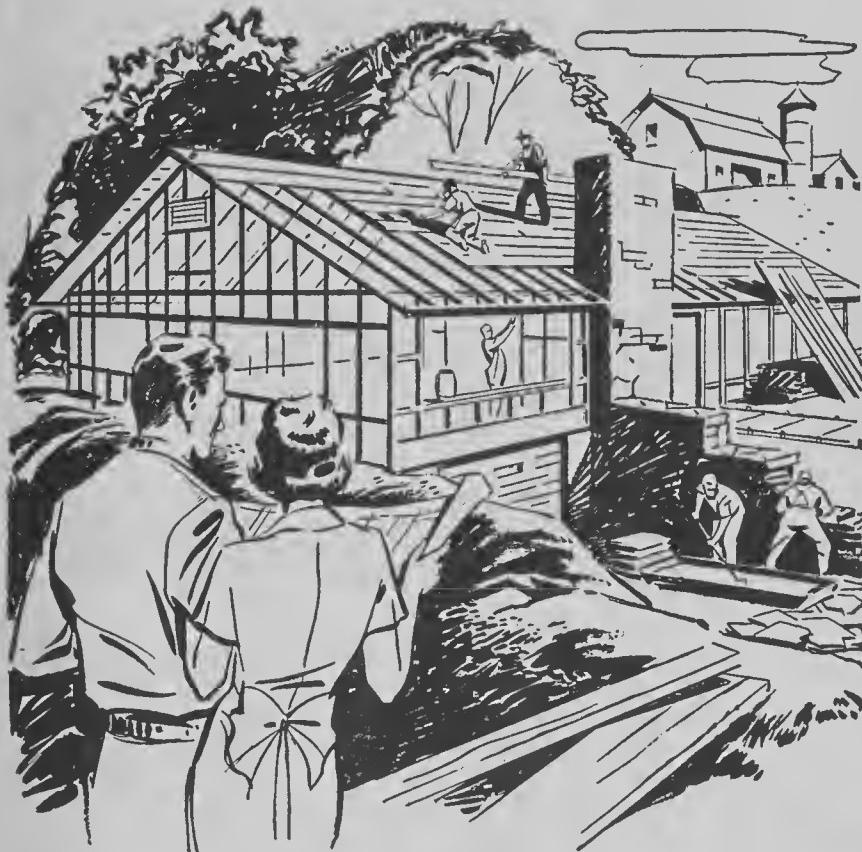
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From Dry Land To Too Much Water

Flooding and water accumulation over the years have encouraged the organization of conservation areas in Saskatchewan



[Guide photos]

The Lacadena ditch is 14 feet deep at most and requires cleaning out if it is to satisfactorily serve all of the land now flooded at the top end.

MOST people think of Saskatchewan farm problems in terms of drought, dust storms and crop failures—of huge grain surpluses and glutted markets. Each of these have had their turn, it's true, but the biggest single problem today, at least in some areas, is too much water. Since the present wet cycle began five years ago, low-lying fields have become marshes, marshes have turned into lakes, and lakes have the appearance of land-locked seas.

To combat this accumulating surplus of water, many municipalities have started permanent land drainage programs, under the direction of the Conservation and Development Branch of the Saskatchewan Department of Agriculture. Once action has been decided on, the first step toward getting such a program under way is for interested farmers in a flooded district to form a local "conservation area."

A conservation area is an organization of landowners, similar to a business corporation, or company. Their initial task is to elect an area "authority" from among their own members, which will act as the company's board of directors. In other words, an executive group that will be responsible for getting things done. The conservation area can build dams, ditches, bridges, and fences, and operate and maintain them.

By last August, 70 such areas had been organized in Saskatchewan, and 30 new ones were pending. Although the plan covers many problems other than flooded land, including fodder shortages, soil erosion, unused land, and poor pasture, most of the organizations were concerned with getting rid of surplus water.

TYPICAL of rural municipalities that have sought a permanent cure for their drainage problems is the R.M. of Lacadena, which lies just north of the South Saskatchewan River, in the western part of the wheat province. The Lacadena project takes in 18 farmers, who have a combined flooded area of about 5,000 acres.

Before the work was instituted, most of this land produced a crop once every five to eight years—some of it hadn't produced anything since the bad drought years of the thirties.

When most of the main ditch was completed in 1953, all but about a section of the flooded land came into production. Even on this, water is only from one to two feet deep where it stood six to eight feet deep before.

Cost of the ditch was \$30,000. This was raised by selling debentures, most of which were bought by the 18 conservation area members. The bond issue is to be paid over a period of 15 years, each participant paying an annual assessment for each acre of flooded land. Outside financial assistance received to date consists of a \$5,000 grant from the municipality, and another of \$6,000 from the provincial government. Engineering and agricultural services are supplied free-of-charge by the Saskatchewan Department of Agriculture.

The main ditch is about 14 feet at the deepest part, and drains southwest into the South Saskatchewan. Except for cleaning out, there has been little work done on it since 1953. However, if finances permit, it was planned that an attempt would be made to finish the job. At the present time, water is higher in the middle of the ditch than at the top end, so that flooded areas in the upper part of the area will remain that way until the ditch is deepened.

What about the farmers that own this land? They have had enough dry acreage to keep them going all these years—will it pay them to have this work done?

"I think it's paying most of them right now," said R.M. secretary H. W.



Earl Denning knows what flooded land means and knows the ditch will pay.

Hammell, who is also secretary of the local area authority, "and the municipality is receiving a good deal of benefit too. We are drawing taxes from land we couldn't fully tax before, and quite a few roads that used to wash out every year are now protected."

When queried about the economics of the project, farmer Earl Denning admitted that he had had some crops from his flooded land since the ditch was built, but he was flooded out again in 1955.

"It'll take another \$50,000 to do the job properly," he maintained. "For one thing, the ditch will have to be a lot deeper at the middle, and we'll need a few lateral ditches too."

Denning and his son George have from 300 to 400 acres under water now. This is the second largest acreage of water-logged land in the valley, and about one-third the total area of their combined farms.

"Our assessment for the project will cost us from \$300 to \$400 a year

for 15 years," Earl pointed out, "which will come pretty high, if we can't crop that piece more often."

The Dennings aren't in favor of a flat per acre assessment at all, and would sooner see a charge based on the number of acre-feet of water each member has on his land. In other words, the more water a man has, the more he will have to pay. Under the present plan, a farmer with a foot of water pays the same as one who has five feet, although the first man's land can be drained by a far less costly project.

That wouldn't always hold true, of course, because it would depend on the length of ditch needed, which, in turn, would be determined by the location. But it might be a point for other districts to consider when they draw up plans to tackle a similar problem in their municipality. There is enough scope in the Saskatchewan Conservation and Development Act to provide the type of assessment that best suits the needs of each particular area.

V

Burley Tobacco May Have Brighter Future

New varieties and some change in cultural methods will increase sales



{Guide photo}
These growers are examining burley varieties at Harrow Experimental Station, Ontario, where extensive tests have been made with this type of tobacco.

THERE is a brighter future in store for burley tobacco, despite the increasing reliance on flue-cured tobacco in Canada for cigarette-making.

That's the view of R. J. Haslam of the Experimental Station at Harrow, Ontario, who is confident now that new methods of growing burley will produce a leaf that will capture a place in the cigarette market of tomorrow.

Burley production dropped from 15 million pounds in 1949, to less than two million in 1953. But tobacco experts learned on a trip through the United States, that burley leaf there was being used in quantity for blended cigarettes.

Canadians hadn't gone for blended cigarettes in the same way, but it was

noted that a mild smoking burley was required and that this was closely associated with thin burley leaves, of a light color. U.S. growers were producing that kind of leaf, and cigarette makers were buying and using it.

NOW, after extensive work, Mr. Haslam believes that growers can turn out a burley leaf that will meet the wants of the smokers. It will, however, require a new method of growing.

Tests showed that variety plays a big part in the kind of leaf harvested. Burley 1 and Harrow Velvet are the ones that Mr. Haslam recommends.

Then, he says, grow the plants closer together. Best results have come from 16- to 18-inch plantings, making about 8,700 plants per acre. Trans-

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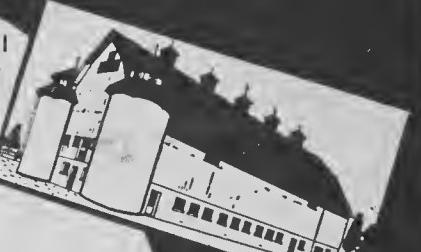
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plant early, not later than the last week of May, to ensure early maturity. Then harvesting will take place in good air-curing weather.

Very high topping is recommended, too, with the removal of the flower, and only one or two top leaves. He concludes that when properly ripened, the tobacco from closely planted and high-topped burley is usually of good quality.

In fact, the swing back to burley already may have begun. In 1955, production was back up to 6.5 million pounds, and requirements for last year were a million pounds more than that. V

Provincial Performance Tests

THE next few years should show just how effective the performance testing of beef cattle will be in Canada, and how such programs can best be operated. Some provinces have already embarked on their programs, others are busy preparing them or trying pilot schemes, and a few are waiting to see how other provinces make out. But all are alive to the importance of this comparatively new tool in the hands of the breeder.

Ontario has had progeny tests for beef cattle since 1950, judging sires on the rate of gain, economy of gain and carcass quality of four of their progeny. After five years, during which 52 sire groups completed the tests, a wide variety of performance was revealed, and the decision was made to switch from progeny to performance tests. This means that information about the inherited characteristics of young bulls, destined to become sires in Ontario beef herds, is now having primary consideration.

With the change to performance testing, a new feature has been added. This is the classification of bulls by

type and conformation, because it has been found that many bulls of desirable type have the ability to make rapid and economical gains.

The Ontario program is administered by the Advanced Registry Board in Toronto, and includes both home and government sub-station tests.

Saskatchewan has started a Performance Testing of Purebred Beef Cattle Program, and the provincial Animal Industry Branch required breeders to make their applications through their agricultural representatives by the end of January, if they wish to join it. This program suggests a pattern for home-testing calves, which will enable breeders to identify and select breeding stock within their own herds on the basis of type and feeding performance. The cost to the farmer who wants the test for his herd is \$10 annually.

An advisory council, representing the Aberdeen-Angus, Hereford and Shorthorn breeds, the University of Saskatchewan, the Canada Department of Agriculture, and the provincial department will review the progress of Saskatchewan's program and will make changes if necessary.

In British Columbia, several purebred herds are listed in the performance testing program, and a few grade herds too. G. A. Luyat, who is in charge of the program, says that it is a little difficult to assess their progress up to the present, because only one purebred herd has weaned so far.

The Manitoba Department of Agriculture has started performance tests in some herds, and the progress of this pilot scheme is being watched with great interest. Alberta is considering the question, and a committee may be established in the province to formulate a policy.

Quebec has not found it possible to start a performance testing program for beef cattle up to the present, but the department of agriculture is looking forward to working out a scheme in the near future. Nova Scotia is seriously considering it, too, and hopes to develop a definite program soon. This would probably be similar to the work developed in other provinces. Performance testing in New Brunswick is likely to come very shortly.

The Prince Edward Island Department of Agriculture is waiting until some of the provinces that are more interested in beef raising have their policies set up, before undertaking a program of its own. Newfoundland has no performance testing policy at present. V

PIONEER PAYS OFF FOR ANOTHER SUCCESSFUL POULTRYMAN



Rudd Watt (left) is filling one of his many hanging feeders with Pioneer Broiler Starter Crumbles while Pioneer's Ontario Sales Supervisor, W. B. Black, examines the texture of this top quality feed.

D. R. "Rudd" Watt, Bronte, Ontario, is particularly pleased with the results that he has been getting on his consistent use of Pioneer Broiler Feeds, in growing 35,000 broilers per crop, over a period of the last three years. Earlier, Rudd tried a number of other feeds and then found that he got his best results and made more profit on Pioneer. He likes the good service that he gets from the Company too.

At his Cluny Lodge Farm (a V.L.A. farm for 9 years), Rudd, who for the past 7 years has been the Secretary of the Ontario Broiler Growers' Association, has recently constructed a new broiler house with 20,000 bird capacity. The building is 250 feet long and 36 feet wide, with a height of 18 feet. The two-storey structure houses 12,000 birds on the ground floor and 8,000 birds on the second floor. Heat is supplied by an oil-fired furnace. This forced-draft hot air heating system is also utilized in the ventilation of the building.

Rudd follows the Pioneer Broiler Feeding Program exclusively. For top livability and growth, Rudd starts his chicks on Pioneer Chick Puritone for the first week. After 6 weeks, excellent finish is accomplished by changing from Broiler Starter Crumbles to Broiler Finisher Pellets. He likes to get his birds off to market at 10 weeks and weighing 3½ lbs. His average feed conversion works out at 2.75 lbs of feed consumed per lb. of meat produced. His best record on a recent crop, was 2.65 feed conversion.

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says D. R. WATT, Bronte, Ont.



The happy couple, Mr. and Mrs. D. R. Watt (left) are seen discussing their excellent broiler feeding results with W. B. Black, Pioneer's Ontario Sales Supervisor.

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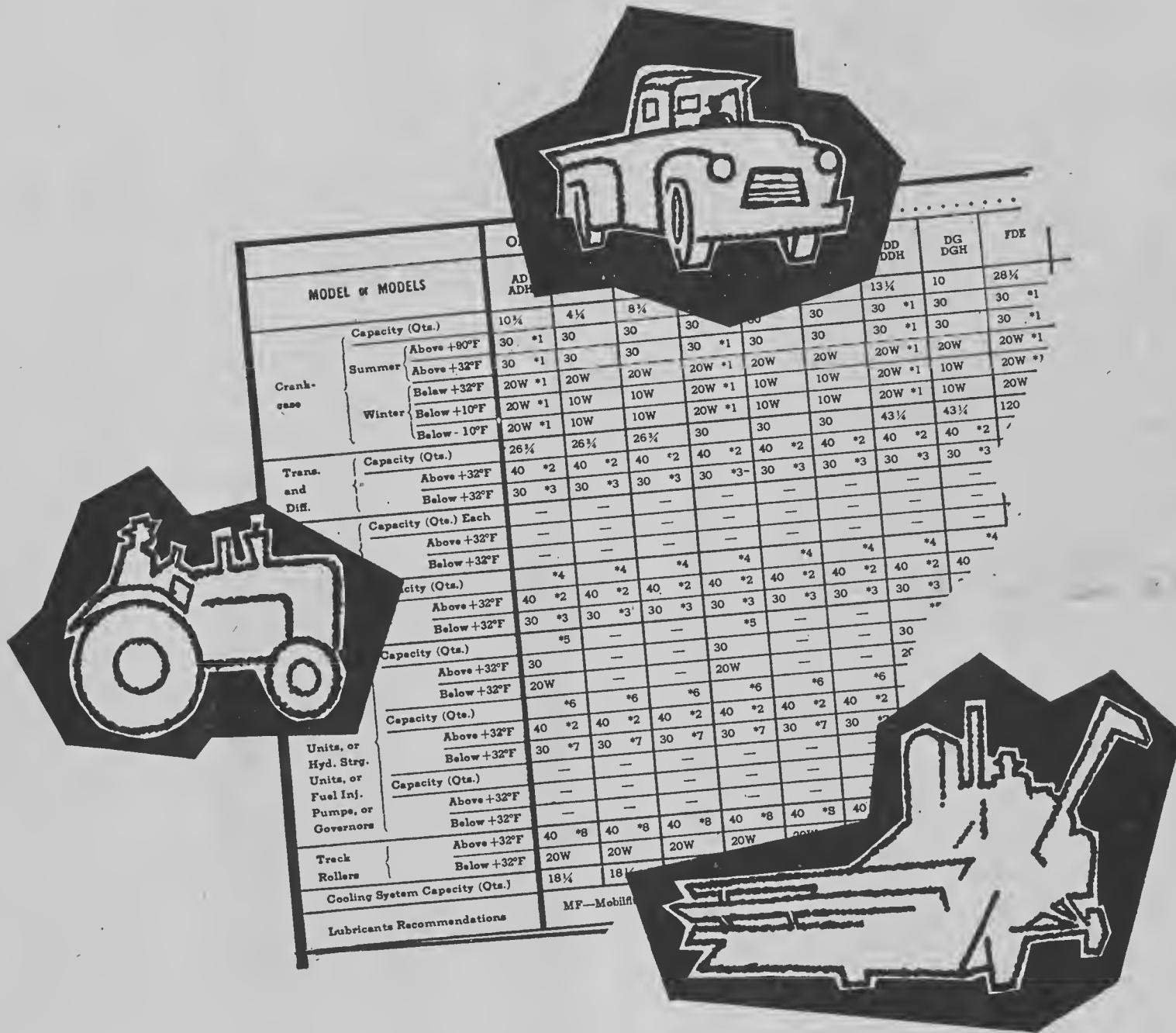
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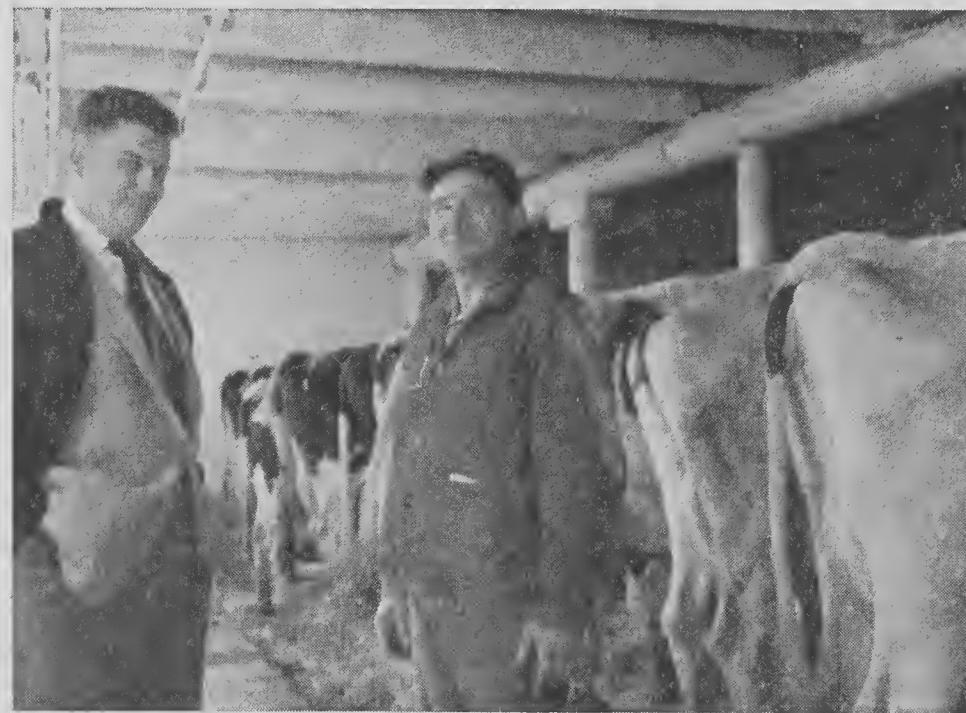
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No Worn-Out Cows for Sale Here

This eastern Ontario dairy farmer has fitted his farm to his market successfully



[Guide photo]

This dairy farmer never has any old, worn-out cows to get rid of. He raises and works his purebred females to full maturity and exports them. He likes the plan.

HERE is a dairy farmer who never sells an old canner, or cutter, cow at giveaway prices. The program that makes this possible, has reduced his disease troubles too.

R. W. Asselstine of Hardington, in Frontenac county, has found that with today's dependable sires available through artificial breeding centers, real culls are an oddity. He has a purebred Holstein herd on R.O.P. and raises every heifer. Instead of maintaining only the best in the herd, he keeps them all. Holstein females are in good demand for the American milk market, and any good female is at her highest value when five or six years old.

So Mr. Asselstine sells every female to this remunerative market, when she is at her prime. Of course, he is always milking young stuff, before they reach peak production. And he can't retain the occasional outstanding cow in his herd. But it is his experience that just about every heifer is a good one. The occasional low producer is sold after her first lactation, but most of them are retained until five or six years old, when they look their best. His own go to New Jersey, which demands purebreds, but the same system could work for any Holstein men with a market for cows in the U.S.

This hard-working dairyman represents a new generation of farmers; or maybe, a regeneration of the old breed that carved farms from the Canadian wilderness.

MR. ASSELSTINE was faced with no easy task when he decided to make farming his career. Nevertheless, when he left the farm where he had been working as a hired man, and began working in a Kingston factory in 1940, he was determined that some day he would have land of his own.

By 1944, he had enough money to make a down payment on a farm. For three more years he worked part-time in Kingston, until, in 1947, he

was set to devote all his time to the farm. Now he has 500 acres, half of which are cultivated. Only 60 acres are in grain; the remainder is in grass and hay, or covered with bush.

He ties 40 cows in his stanchion barn now, and runs a total of 100 head. To make the most of his limited capital, he has built up only two lines of equipment—that for hay making (he hasn't touched silage yet) and grain harvesting.

Four men work on the farm, including himself and his son Cyril. Another son, Grant, runs the milk truck on their route. Their fluid milk market gives them about 20 per cent surplus on the amount they ship. V

Peace River Market Gardener

THIRTY years ago, Ralph Purcell left the Rio Grande country of Texas and followed the grass and moisture northward. He found both around Peace River, Alberta, and started to build up a small herd of good cattle. At that time he had no idea of becoming a market gardener.

Today, Ralph and his wife farm 50 acres on Shaftesbury Flat, a strip of rich, alluvial land about two miles south of Peace River town, that has become the center of a thriving market garden industry. About a dozen growers on this strip produce an amazing variety of corn, beans, cucumbers, cabbages, potatoes, carrots, peas, turnips, beets, and even tomatoes, not to mention fruits such as currants, plums, raspberries, strawberries, crabapples, and about every variety of flowers imaginable.

"We can grow just about anything here if it's started under glass," Ralph said. "We've had muskmelons and watermelons: once we even shipped out a carload of cantaloupes."

The Purcells use about four acres of their land for vegetables of various

types, and the remainder is seeded to wheat and oats for their chicken enterprise. Each spring they raise from 350 to 400 birds. The only outside help used is for potato picking, and the only machinery used is a potato digger. All the rest of the work is done by horsepower, but the kind generated from oats, not gasoline. A couple of good milk cows keep the farm supplied with butter and cream.

Although 30 years in the Peace River country doesn't exactly qualify Ralph as a pioneer, he married into a pioneer family and lives in a house which played an important role in the area in days gone by. Mrs. Purcell's father and mother came from Winnipeg, via ox team, at the turn of the century, and her father took up official duties with the Hudson's Bay Company at Fort Vermilion.

The two big problems facing Peace River market gardeners today are frost and markets—both the crop-killing early frosts, and the permanent freeze-up, that cuts off navigation to isolated mining communities that still rely on the river to transport most of their freight. Fruit and vegetables from the Flat have been shipped as far north as Hay River, Yellowknife, and Great Bear Lake.

Two young Dutchmen, John Geling and Maynard Haveman, who operate the largest market garden in the area, truck their produce regularly to the thriving community of Dawson Creek, B.C. Sometimes they haul up the Alaska Highway as far as Whitehorse, Yukon Territory. They find a ready market there, and the prices are high enough to make it worth their while to do that.

Although the northern development boom has created a large potential market for fruit and vegetable growers in the Peace River district, many feel that they won't be able to take full advantage of this under the present set-up. Buyers for large mining concerns have to deal independently with several growers to get the large quantities of produce they want. When something happens so that some of these growers can't deliver, the buyers are forced to place hurried orders with big suppliers in the more settled



[Guide photo]
A glimpse of the largest market garden south of Peace River town, Alta.

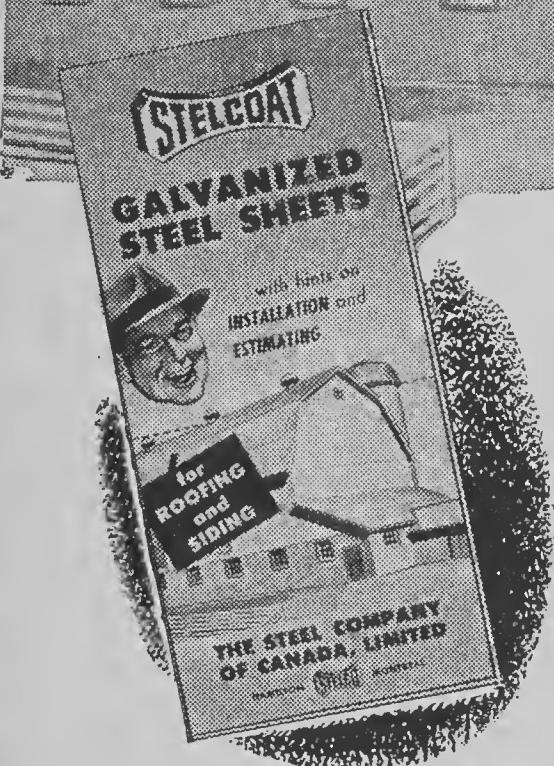
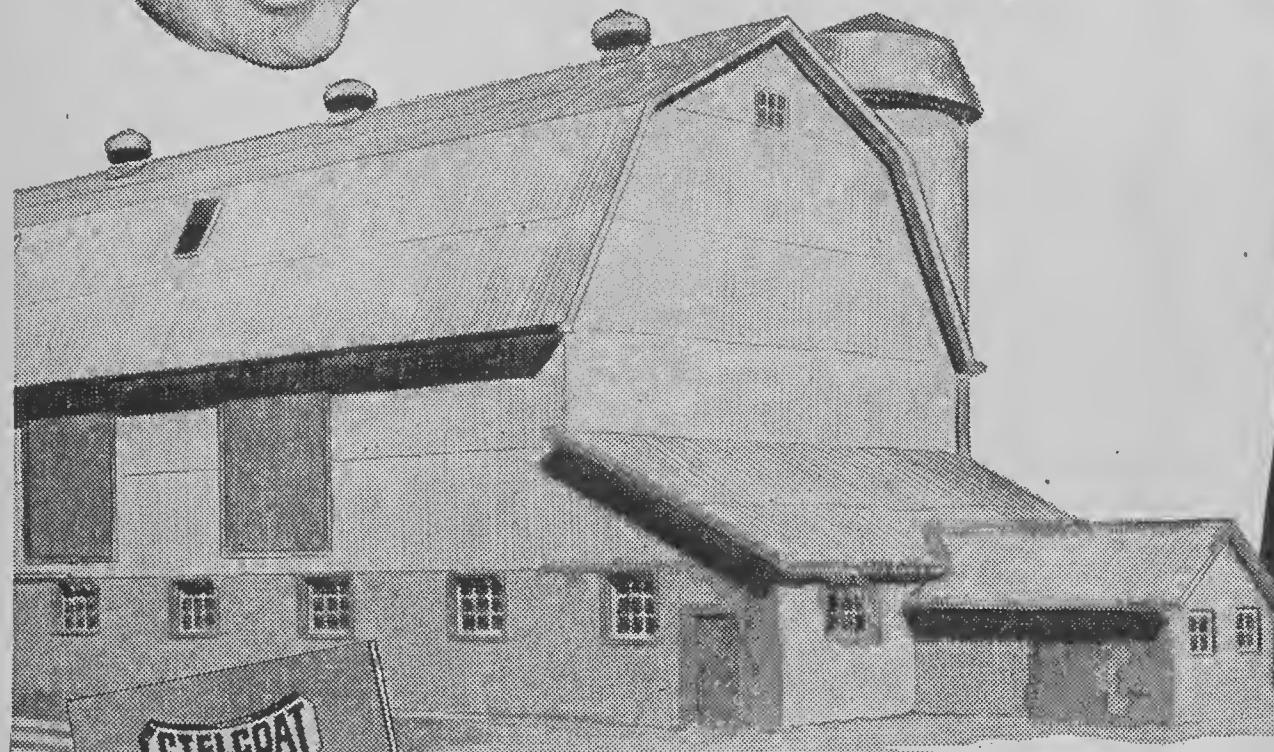
areas to the south. Once a customer is lost this way, he seldom comes back: he must have his supplies when he wants them, and it's much simpler for him to deal with a single supply agency.

"We can't go on forever selling our stuff from door to door," Ralph Purcell pointed out. "What we need most of all is a central selling agency to handle all our produce right here in Peace River." V

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Artist at home beside some of her paintings. Photo by Guide camera.

FROM the top of a treeless knoll, a little girl resting had a fine vantage point for viewing the cloud patterns against the broad sky, the movement of light and shadow across the foothills rolling and rising westward to the Rockies. Romping through the long prairie grass, she found excitement and sheer delight in discovering the first bright blossoms of the season.

One of the early and most vivid memories of Annora Brown, now one of Alberta's famous artists, was the color and the beauty of annual phlox growing in a small diamond-shaped plot of flowers planted by her mother. There were other flowers, of course, but to the small girl who loved and treasured color and flowers, the phlox seemed to have a special glory of its own. Curious neighbors came to lean on the fence surrounding the house-yard and to remark to Mrs. Brown: "But those kind of flowers don't grow out here."

Mrs. Brown, who as young Elizabeth Cody, had in 1891 travelled from Ontario to southwestern Alberta to become a teacher in the new two-room school built at Fort Macleod. A few years later she married Forester Brown, who as a young lad in 1885 had come from London, England, to be a farm-apprentice to an Englishman farming near Moose Jaw, Saskatchewan. He soon forsook that training as he found his instructor to be almost as "green" at farming as he was himself. Those were exciting days in the history of the West. Forester Brown joined the North-West Mounted Police two years after his arrival in Canada. In a party under the command of Major-General Sir Sam Steel the young Englishman shared in new adventures. In the course of duties he rode by horse from Golden, B.C., on the C.P.R., through the Crow's Nest Pass to Fort Macleod, Alberta's first mounted police outpost, about ten years before the railway was extended into that southern area.

Mrs. Brown loved flowers and took active measures to have them about her when she settled in her own home. She noted with pleasure that her small daughter seemed to have inherited an interest in flowers and she encouraged Annora to observe, read about them, to learn their names and distinguishing characteristics. Later in high school, Annora's teachers found her an apt and serious botany student with decided skill in sketching. They too encouraged her to develop her knowledge and talent to the full.

Today, Annora Brown is numbered among Alberta's famous artists. She has charmed a still wider audience with her book *Old Man's Garden*, published in 1955 by J. M. Dent & Sons, Toronto and Vancouver. It was received with warm acclaim by garden lovers, botanists, and those who delight in Indian legends. Both in the text and illustrations Annora Brown reveals herself as a person who has skill and power in communicating her knowledge of the world about her. It is true that she has concentrated on prairie themes, but the flowers she paints, the legends she relates are not boxed in by provincial or territorial lines, rather they spill out in interest and appeal across Canada and over this continent.

The Countrywoman

*A personal sketch of
Annora Brown, artist
famous for her paint-
ings on western themes*

by AMY J. ROE

expert botanists. The list of references given in the introduction to her book is ample evidence of her industry in seeking out authoritative material. What amazes the reader is the skill with which she has extracted, condensed and presented it for the reader's entertainment.

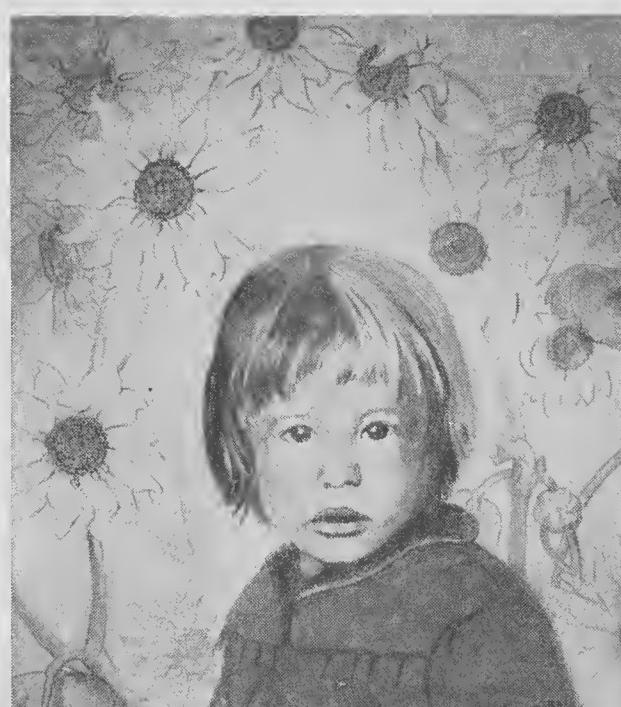
One of her oil paintings "The Prairie Chicken Dance" won a prize and was selected for reproduction in the Alberta Golden Jubilee Anthology. Black and white drawings of hers illustrate *Winged Canoes At Nootka* by Pamela Stephens, published by J. M. Dent & Sons last year—a book of famous British Columbia stories in a timely reminder that the 100th anniversary shortly is to be celebrated. Nine of Annora Brown's paintings are in the "Emma Reade Collection," hung in the library of the University of Alberta. Another "Summer Afternoon," a landscape depicting Lake Cameron in Waterton Lakes Park, hangs in the new library of United College, Winnipeg, presented by the college alumni in 1953 as a memorial to the late Gerald Riddell, who had served as Canada's permanent delegate to the United Nations. A mural done by Annora Brown decorates a wall in Crescent Heights School, Calgary, contributed by the students.

Following her graduation from high school, Annora Brown had an interval of ill health, during which she had an invitation to visit her mother's sister in Toronto. Her aunt considered that a change and possibly new interests might help Annora. In reply to her aunt's query as to what special activity she might like to engage in, Annora's reply was that she would like best "to take some lessons in art." Through the kindly efforts of her aunt, she was registered at mid-term and started attending Design classes on January 1 in the Ontario College of Art. At the end of the term, she won a scholarship award and was granted a year's standing. Encouraged, she returned for the following three years and won a scholarship and cash prizes in second and third years and a diploma of graduate standing at the end of three and one-half years.

From the fall of 1929 to the end of the spring term of 1931, Annora was Art teacher at Mount Royal College, Calgary—a position from which she resigned in order to return home to care for her mother who was then ill and who later died. Her father died at the age of 93 on August 5, 1956. During the period that she was fairly closely tied to home by family duties and household tasks she set herself firmly to work on producing paintings in oil, water color, casein paints, pastels as well as line sketches. She was able at certain times to get away for short intervals. She worked with the Extension Department of the University of Alberta, holding short art classes at a number of the larger centers in southern Alberta. She was an Art instructor at the Banff Summer School for six years.

She took an active part in the Fort Macleod Handicraft Guild and did some 100 formalized motifs of western themes: flowers, birds, grain elevators, fences, telephone lines, spring, summer, fall and winter designs for reproduction in needlework or hooked rugs. These were taken up by the Alberta Handicraft Guild and Miss Brown was made an Honorary Member. She taught others to make native plant dyes and put them to use in decorative ways in the home. One of the pieces, a batik wall hanging which she designed and made, depicting "An Indian Legend," is in the permanent collection of the Canadian Handicraft Guild, Montreal. Another similar batik, depicting "The Parade of the West," was ordered by the late J. Murray Gibbon, Montreal, who as a public relations officer with the Canadian Pacific, did much to encourage the arts and crafts, from coast to coast in Canada, which in turn brought attention and recognition to good work done by individuals.

A representative of the firm, which published her own book and which (Please turn to page 67)



Pastel child and flower study "Brown-eyed Susan," owned by Margaret Owens, M.D.

Link Between Cradle and School

by DORIS M. BRYENTON

FOR three hours each morning Lorna Stonehouse is mother, companion, teacher to 17 youngsters four and five years of age who invade her home at Fort Saskatchewan, Alberta. With a minimum of expense and many hours of hard work she has established a kindergarten the effects of which are being felt and appreciated by parents and teachers of that district.

"It is so varied," Mrs. Stonehouse said, when questioned about her work with the kindergarten class. "No two days ever present the same problem." Perhaps it was this variety that drew her entire family wholeheartedly into the kindergarten work when, three years ago, Lorna decided that she would fulfill a life-long ambition and establish a school for pre-school-age children.

She prepared for the teaching by taking a correspondence course through the "Canadian Kindergarten Institute." This, coupled with a natural love for children and an unusual knack for handling them, led to her success.

Her first school was established in northern Manitoba but after two successful terms the family moved to Fort Saskatchewan, an industrial town near Edmonton. Not one of the family with its three school-age boys, thought of dropping the kindergarten project after the move. It had become a part of their everyday living.

From the time of choosing a lot, the Stonehouse family had the re-establishment of their school in mind. They picked a large, corner lot and received permission from the town authorities to set the house forward to allow room for a playground in the backyard. Plans for the house, when submitted to the contractors, called for an 18 by 24-foot room in the basement. The plans also designated an extra number of large windows in that room and, to the plumbers' horror, a sink to be placed at a height of two feet.

PERMISSION was granted by the town to operate the kindergarten, subject to inspection by local education authorities. Lorna began in June contacting parents of four and five-year-olds and soon had enough enrolments to warrant the work and expense of furnishing and equipping a new school room. Parents pay \$10.00 per child per month to enjoy the three hours of freedom from nine to twelve each morning. Teaching days follow as closely as possible regular school days with vacations at Christmas, Easter and during the summer months.

The long move from Manitoba had left meagre funds with which to establish the project and so the entire family pitched in to lend a hand with the work. The boys, energetically wielding brushes, covered the cement walls in a warm shade of yellow. The cold floor was covered with bright linoleum. Mr. Stonehouse spent long hours at building cupboards, tables and other equipment for the room. A large blackboard was made from a sheet of plasterboard and edged with a chalk ledge.

Cupboard space is an essential in kindergarten work and so one entire wall, from floor to ceiling, was fronted by deep shelves closed in with attractive plywood doors. Built in under the stairs was a combination radio-phonograph. Two long, low tables were simply made from heavy plywood and the 20 little folding chairs purchased in the toy department of one of the city stores.

Certain snags had to be overcome—such as the second exit for fire safety in the building. The problem was at last solved by the construction of a set of portable stairs which are easily

each personalized with a colorful picture of a puppy or kitten. Boots are neatly arranged below and wet mitts clipped to coat pegs with clothes pins.

Purpose of the school is to give the children a basic training in preparing them for the quick plunge into school life which is facing each within the next year or two. Here is a link between the carefree days of babyhood and the stricter discipline of school life. Carefully planned activities help them master the co-ordination necessary in seemingly simple jobs such as cutting and coloring. But above all, the aim is to teach them co-operation

Lorna then follows through with an instructive story on some subject, perhaps the Eskimo people. That theme is followed throughout the morning, the story teaching them how and where these northern people live, what they eat and wear. While the children's interest is still running high on the thought of "Iglac," the Eskimo boy, Lorna gives them a hectographed picture of an Eskimo to color.

They sit quietly around the two long tables while two children pass out the work, boxes of crayons, snub-nosed scissors and bottles of glue from the cupboards. Frequent questions are asked about the coloring, all of them knowing their colors flawlessly. Tiny hands work over the pictures, cutting them out, gluing them to thin cardboard and standing them up. They work carefully, pleased with the promise that the "inspectors" will choose the best work when they return from school. The two older Stonehouse boys enjoy this extra-curricular work immensely.

The morning's instruction continues with the learning of a new game or dance, perhaps a simplified version of the French Minuet, or an action game in which the children must follow instructions to perform the intricate patterns. They take great pride in learning the movements flawlessly so they can move through a game or dance without hesitation. All is preparation which will help them master similar tasks more easily in the coming years.

How Lorna Stonehouse provides basic training to prepare small tots for the quick plunge into the stricter discipline of school life. The kindergarten established in her home has become a source of joy and pleasure to her and of which she says: "It is a work that many mothers could do as a service to their community and a wonderful experience for themselves"

pushed up to a window and hooked in place. The window is held open by a hook in the ceiling and provides ample room for the little tots to clamor out. Such an arrangement also adds zest to fire drill.

A small portable organ and a few of the toys and books were the only things transferred from Manitoba. This meant a large outlay for Lorna when supplying her cupboards with pencils, craft-paper, crayons, hectograph, scissors and the thousand-and-one other articles needed by a group of 17 active five-year-olds. Two walls of the room are devoted to low toy shelves, a carpenter's bench for the boys supplied with miniature hammer, saw and endless numbers of blocks of wood for them to work on, a kitchen cupboard for the girls stocked with tiny dishes, pans and plasticine which makes play pastry. Balls, tops, cars, guns, blocks, dolls and any other things which small tots could desire for amusement fill other toy shelves.

ACTIVITY begins about a quarter to nine when a freckle-faced, red-headed little imp pops her head in the door with a cheery "Good morning" that could be counted on to put anyone in good spirits. She is followed by pairs and groups of three and four until the room begins to resemble a beehive in honey season. Amazingly enough, in about ten minutes' time, all coats and scarves are neatly hung on the row of coat hooks which is

in working and playing with children of their own age.

For a few shyer ones, the kindergarten takes them easily through the first break from their parents. Whereas school puts them in a strange atmosphere of rowed desks and large rooms, the kindergarten is an informal place where it would not be amiss for the child to climb up on "teacher's" knee and get a little of the accustomed cuddling.

Harsh discipline is never used with the children. To each of these tots, Lorna is a personal friend and her word is law. Merely knowing that they are in her displeasure is usually enough to bring tears to their eyes and quick repentance of misbehavior. In extreme cases they might be stood in a corner during story period or have their name written on the blackboard as a "Goop," a title gleaned from one of their favorite stories and applied to those who are noisy while eating.

THE morning opens with a discussion period immediately following the "Good Morning Song" and prayer. While teacher tries to guide conversation in the direction of their morning's theme, attention wanders frequently to the previous day's experiences which are all usually related before the period comes to an end. "If parents knew the tales their children carry to school at times," Lorna remarked, "I'm sure all teachers would be sworn to an oath of secrecy."

DISMISSED for a 15-minute play break, they turn their interest to dolls and cars. Some gather in little groups to show off new clothes, trinkets or toys they have brought to school. John has a set of jacks and little Clancy is dressed from head to toe in cowboy regalia complete with boots and ten-gallon hat that he takes pride in displaying. The girls congregate around teacher to tell her of amusing experiences, jokes they have heard at home or show her their new dress or necklace. For summer use, there is a set of swings, slide and teeter and large sand box in the back yard where the children may enjoy a few minutes of carefully supervised outdoor play.

Then it is back in for the "quiet period" when the children are required to sit at the tables with their heads on their arms, eyes closed and listen to the "quiet music" which Lorna puts on the record player. To sit five minutes, motionless and silent, is perhaps the most difficult task of the morning.

Next comes the mid-morning snack. Each has a day for helping to bring down the tray of cookies and the 17 little white mugs which are filled with milk and have little red animals running all around their rims. Lorna is proud of the fact that she has never had a child in her class who would not drink milk, at least by the end of the term.

Birthdays are not forgotten and it is at lunch time that they are celebrated. Each child is allowed to order

his birthday cake in advance, sometimes resulting in a pink cake with purple icing but it is thoroughly enjoyed by the youngsters. Chocolate milk is served as a treat on special occasions.

After lunch comes a singing period. The children know the words to dozens of songs to which Lorna accompanies them on the little organ. Often they sing their own accompaniment to dances and games.

As a variation, the CBC "Kindergarten of the Air" is sometimes used as a part of the morning's schedule. The children sit around the radio and carry out the projects as outlined on the program along with hundreds of others their age across Canada.

The morning ends with a story period during which time the tots gather in a tight little group on the floor around Mrs. Stonehouse and listen intently to a story picked from the large stock of books. It is attempted to harmonize the tale with the day's theme. The year's study program for the children includes discussions of community life, nature study and national groups.

PARENTS come to collect some of the children, others walk the few blocks home. Lorna finds herself swamped with requests to keep youngsters for the whole day but finds it seldom possible to do so with a family and house to care for.

Parents are always welcome to come to the kindergarten and see for themselves what is being done there. Occasional parties or concerts at which the children present a program of songs, recitations, finger-plays or dancing, are given at Christmas or "graduation" time so the parents may see what is being accomplished.

For Lorna, after twelve there is still the chores of cleaning a room left in shambles by the energetic youngsters and baking of cookies or cakes for the following day. She leans heavily on "Ice-box cookies" which can be left in the fridge and baked at any time. There is also the daily task of preparing a schedule for the morning, hectographing pictures and checking supplies.

But she wouldn't give the work up. As well as providing a small income, it is a source of joy and pleasure to her. "Those three hours go the fastest in the day," she declares. "It is gratifying to see the change in class from fall to spring; from individuals, timid and awkward at their small tasks to a confident group which can work together and are comparatively skillful at the little things they do."

Mrs. Stonehouse feels that kindergarten is an essential part of a child's training and would like to see more of them established in small centers to give children a better opportunity to enjoy their first year at school. "It is a work that many mothers could do as a service to their community and a wonderful experience for themselves." ✓

Have you as a mother made use of CBC program Kindergarten of the Air to interest small tots at home? What response have you observed from children to the games, songs, stories or ideas? Write an account of your own or a friend's experience along these lines. Send it to The Countrywoman, The Country Guide, Winnipeg. ✓

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½ cup shortening
⅓ cup sugar
1½ teaspoons salt
1 package quick dry yeast
1 teaspoon sugar

¼ cup lukewarm water
1 egg, beaten
2½ cups sifted Robin Hood Vitamin Enriched Flour
FILLING:
¾ cup chopped dates or raisins
¾ cup nuts, finely chopped
1 teaspoon grated lemon rind

HEAT apple juice to boiling. Stir in rolled oats, shortening, sugar and salt. Cool to lukewarm. Add yeast dissolved in lukewarm water. Add egg and beat well. Stir in flour gradually. Robin Hood Flour is "Bake-Tested" to give you *uniformly best* results. It always blends smoothly, perfectly. Turn out dough on floured board and knead until smooth (about 5 minutes). Let rise in warm place for 30 to 40 minutes or until double in bulk.

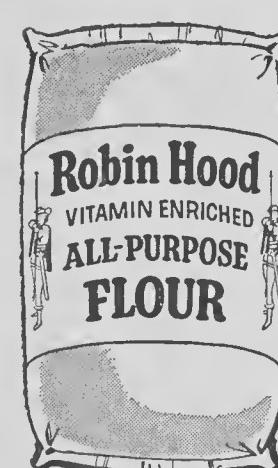
PUNCH dough down and let rest ten minutes. Divide dough in three. Roll each portion on a well floured board to form a circle about 12 inches in diameter. Cut circle in eight pie-shaped wedges.

FILLING: Combine all ingredients. Place a spoonful at base of each wedge. Roll up starting at widest part of wedge. Curve ends to form a crescent.

BRUSH with melted margarine or butter. Cover and let rise on a greased baking sheet until double in bulk, about 30 minutes. Bake in a hot oven (400°F.) 15 to 20 minutes or until brown.

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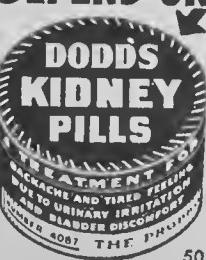
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50

Ways with Winter Vegetables

These colorful root vegetables can provide the basis for many tasty winter dishes

ROOT vegetables — turnips, parsnips, carrots and beets deserve meal-time respect. Not only are they dependable (stored in a cool, dry cellar they stay crisp and fresh for several months), but they are also the basis of many delicious, winter-time dishes. Home grown or bought, root vegetables are inexpensive, yet they are first-rate body-building food.

Many families give these vegetables their rightful place in meal planning. Others neglect them because the flavor seems strong when cooked or the texture is "woody." If strong-flavored vegetables such as turnip are boiled uncovered in fairly large quantities of water for the shortest time possible, the flavor is mild and pleasant. Removing the woody core from parsnips before cooking gives a sweeter, more tender taste.

There are many ways to serve these vegetables. Instead of the usual boiled-and-buttered method, try them French fried, in a vegetable chowder, raw as relish sticks or perhaps in a jellied or lettuce salad. Combine them with meat, cheese or eggs for a main dish. For something really different, serve peas in cooked turnip or beet cups or in hollowed-out cooked onions. Colorful and attractive they are bound to be a hit with your family.

Turnips and Apple Glaze

6 slices turnip $\frac{1}{4}$ c. brown sugar
($\frac{1}{2}$ -inch thick) $\frac{1}{4}$ c. butter
2 med. cooking apples

Peel slices of turnip. Cook in boiling salted water until tender, about 20 minutes. Drain. Slice unpeeled apples in wedges about $\frac{1}{4}$ -inch thick. Melt butter in a heavy frying pan, add brown sugar. When butter-sugar mixture is dark brown add the apple slices and glaze until lightly browned, about 5 minutes. Arrange turnips and apple slices in large pie plate. Pour remaining liquid from pan over apples. Bake for 10 minutes in moderately slow oven (325° F.) or until apples are tender, basting occasionally. (Cooking may be completed in frying pan by adding turnips to pan after browning and removing apples. Cook until turnip is well glazed—3 minutes). Yield: 6 servings.

Cheese Coated Parsnips

8 small parsnips $1\frac{1}{2}$ c. grated cheddar cheese
(4 c. cubed)

Peel parsnips, cut into cubes and cook in small amount of boiling, salted water until tender, about 15 minutes. Drain and roll in grated cheese. Place in greased shallow baking pan and bake in moderately hot oven (375° F.) until golden brown, about 15 minutes. Yield: 6 servings.

Potato and Onion Pancakes

2 c. grated raw potatoes	2 T. flour
$\frac{3}{4}$ c. grated raw onion	$\frac{1}{4}$ tsp. baking powder
2 eggs	1 tsp. salt
	$\frac{1}{2}$ tsp. pepper

Combine potatoes, onions and eggs. Blend well together. Sift flour, baking powder, salt and pepper together and add to onion and potato mixture. Again, blend well together. Drop by spoonful to a hot griddle or lightly greased frying pan. Cook until brown on one side (about 4 minutes). Turn and cook until brown on other side. Recipe makes 24 medium pancakes which would serve 6

as a main dish for lunch or supper. Serve with sausages and a crispy salad.

Carrot Loaf

1 small onion, chopped	1 c. bread crumbs
3 T. butter	2 eggs
2 c. grated raw carrots	1 c. milk
	1 tsp. salt
	Dash pepper

Brown onion in melted butter and add it to crumbs. Grate carrots or run them through food chopper. Add these with milk, beaten eggs and seasonings to crumb mixture. Mix well. Turn into well greased baking dish and bake in moderate oven (350° F.) until loaf is firm, about 45 minutes. Serve from baking dish or unmold it and serve with white sauce to which hard cooked eggs have been added.

Glazed Carrots

Cook small carrots whole; cut large ones in halves or quarters lengthwise. For 4 servings: stir 1 T. butter, 3 T. sugar and 1 tsp. water in a frying pan over low heat until blended well. Add carrots and cook until they are glazed and slightly browned, turning occasionally to cook evenly.

Carrot Timbales

1 c. cooked carrots, chopped	1 T. melted butter
$\frac{1}{2}$ c. milk	$\frac{1}{2}$ tsp. salt
2 eggs	$\frac{1}{2}$ tsp. pepper

Beat eggs slightly; stir in remaining ingredients. Pour mixture into buttered individual molds; set molds in pan of hot water. Bake in moderate oven (375° F.) for about 30 minutes or until knife inserted comes out clean. Unmold.

Red Flannel Hash

4 c. chopped cooked potato	1 clove minced garlic
1 $\frac{1}{2}$ c. chopped cooked beets	$\frac{1}{2}$ c. cream
$\frac{1}{2}$ c. chopped onion	$\frac{1}{2}$ tsp. salt
1 (12 oz.) can diced cooked corned beef	$\frac{1}{8}$ tsp. pepper
	$\frac{1}{2}$ tsp. dry mustard
	6 eggs
	Chopped parsley

Mix all ingredients but eggs, parsley. Spoon mixture into greased 2-quart casserole. Bake, covered in moderate oven (350° F.) for 25 minutes. Remove cover; shape six hollows in hash with back of spoon; drop an egg in each. Season. Bake 20 minutes. Add parsley. Makes 6 servings.

Parsnip Casserole

3 c. mashed cooked parsnips	1 c. grated process cheese
1 c. cubed cooked ham	$\frac{1}{2}$ c. crushed cereal crumbs
1 c. canned mushrooms	

Season mashed parsnips with salt and pepper to taste. Combine ham, mushrooms and cheese. Alternate layers of parsnips and ham mixture in greased 2-quart casserole. Sprinkle top with cereal crumbs. Bake in moderate oven (350° F.) for 25 minutes. Makes 6 servings.

Scalloped Parsnips

2 c. sliced, cooked parsnips	$\frac{1}{4}$ c. bread crumbs
1 $\frac{1}{2}$ c. thin white sauce	1 T. melted butter

Place parsnips in buttered baking dish. Pour white sauce over them. Mix crumbs with butter. Sprinkle crumbs over top. If desired, sprinkle $\frac{1}{4}$ c. grated cheese over the parsnips before adding the crumbs. Bake at 400° F. (hot oven) 20 minutes or until brown. Makes 4 servings.

Garden Salad

2 c. torn lettuce	1 onion, sliced
$\frac{1}{2}$ c. celery tops	$\frac{1}{2}$ c. raw beet, grated
$\frac{1}{2}$ c. diced celery	$\frac{1}{2}$ c. raw turnip, grated
$\frac{1}{2}$ c. raw carrot, grated	$\frac{1}{2}$ c. raw tomato, diced
$\frac{1}{2}$ c. raw parsnip, grated	$\frac{1}{2}$ c. French dressing OR sweetened vinegar dressing

Separate onion slices into rings. Toss all ingredients lightly, just before serving. Serves 6 to 8.

Winter Vegetable Scallop

4 T. butter	12 cooked white onions
4 T. flour	2 c. cooked carrot strips
$\frac{1}{2}$ tsp. mustard	4 slices process cheese, cut in 1-inch strips
$\frac{1}{2}$ tsp. salt	
$\frac{1}{8}$ tsp. pepper	
2 c. milk	
2 c. cooked brussels sprouts	

Make white sauce with butter, flour, mustard, salt, pepper and milk; pour over vegetables in 8-cup shallow baking dish; top with crisscross cheese strips. Bake in moderate oven (350° F.) 30 minutes or until bubbly. Makes 6 servings.

Harvard Beets

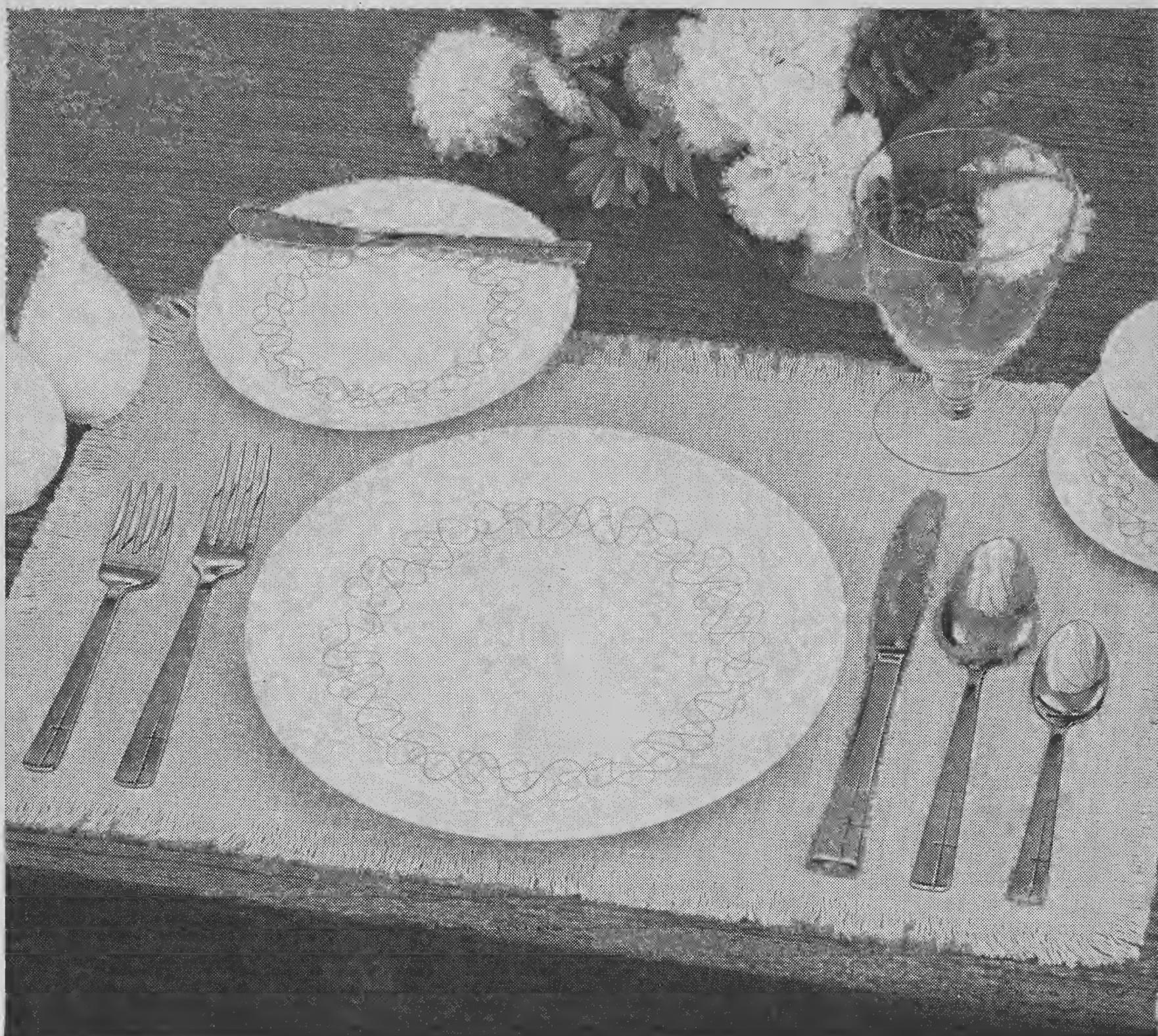
2 c. boiled beets, cubed	1 $\frac{1}{2}$ T. sugar
2 T. butter	$\frac{1}{2}$ c. mild vinegar
1 T. cornstarch	Salt

Melt butter; add cornstarch and sugar; stir in vinegar gradually. Continue stirring until sauce boils. Add beets; keep warm until sauce is a rich red. Add salt to taste.



For hearty eating serve glazed carrots and browned potatoes with flank steak.

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Dessert Makes the Difference

Give that added spark to your meals with delicious, flavorful desserts

by PHYLLIS A. THOMSON

DESSERT gives the finishing touch to a meal. Depending upon your family's preference you may choose fruit, crackers and cheese, fluffy whipped desserts, steamed or baked puddings with hot flavorful sauces.

One of the few points to consider in selecting a dessert is to choose one that "blends" with the rest of the meal. A heavy dessert makes a good ending to an otherwise light meal, while a fresh fruit cup adds crispness and color to a meal that may be somewhat soft and dull looking. A rich dessert is best after rather plain foods. During winter months, most of us seem to prefer hot desserts—flaky pies or steaming puddings.

Desserts are fun to make. There are dozens of exciting dishes from which to choose and many ways to vary simple recipes. Baked apples filled with nuts, dates or a spoonful of mincemeat are easy to prepare and quick to serve. Pears are another fruit, ideal for baking. Wash about six pears and place them in a baking dish with half a cup of water and one-third cup of sugar. Add just a dash of salt and bake in a moderate oven, 350° F., about 60 minutes or until the fruit is tender. Molasses or brown sugar may be used instead of white sugar in making the syrup. If you have leftover hard sauce, add a little chopped candied ginger to it and serve on the pears.

Most of us love the old favorites, served just right. Here are some special versions of popular old-time dumplings, cobblers and puddings as well as a few new favorites to make your desserts the pride of the family.

Cherry Pudding

1 1/4 c. sifted flour	2 T. melted shortening
1 1/2 tsp. baking powder	1 3/4 c. drained pitted red sour cherries
1/2 tsp. salt	
1/2 c. sugar	
1/2 c. milk	

Sauce Mixture

2 c. hot water or cherry juice and water	1/2 to 3/4 c. sugar
	2 T. butter

Sift together flour, baking powder, salt and 1/2 c. sugar. Add milk and melted shortening; stir only until smooth. Spread dough evenly in greased shallow pan, 12 by 8 by 2 inches. Arrange cherries over top. Combine sauce ingredients and bring to boil. Pour over cherries. Bake immediately in moderate oven (375° F.) 45 to 50 minutes. Serve warm. Makes 8 servings.

Brownie Pudding

1/2 c. sifted flour	1 T. melted shortening
1 tsp. baking powder	1/2 tsp. vanilla
1/2 tsp. salt	1/4 c. chopped nuts
1/3 c. granulated sugar	1/2 c. brown sugar
1 T. cocoa	2 T. cocoa
1/4 c. milk	3/4 c. boiling water

Sift together flour, baking powder, salt, granulated sugar and cocoa. Add milk, shortening and vanilla; mix only until smooth. Then add chopped nuts. Turn into greased casserole or small baking dish. Mix together brown sugar and cocoa; sprinkle over batter. Then pour boiling water over top of batter. (This

forms sauce in bottom of pan after pudding is baked.) Bake in moderate oven (350° F.) 30 to 40 minutes. Makes 6 to 8 servings.

Baked Chiffon Pudding

1 pkg. coconut cream pie filling mix	3/4 c. light cream
2 c. milk	3 egg whites
1/2 tsp. vanilla	Dash salt
3 egg yolks, slightly beaten	6 T. sugar
	1/4 c. slivered blanched almonds

Preheat oven to 375° F. Select a shallow baking pan 8 by 8 by 2 inches or six individual baking dishes.

Combine coconut cream mix and milk in saucepan. Cook and stir over medium heat until mixture comes to a full boil. Remove from heat. Add vanilla. Measure out 3/4 c. cooked pudding and combine with egg yolks. Set aside this pudding-egg mixture to use for fluffy top. For sauce: Mix cream with remaining pudding. Pour sauce into baking pan. For fluffy top, beat egg whites and salt until soft peaks are formed. Add sugar gradually, beating constantly. Continue beating until very stiff peaks are formed. Then fold meringue into pudding-egg yolk mixture. Carefully spread mixture over sauce in baking pan. Sprinkle with almonds. Set in larger pan of water and bake in moderate oven (375° F.) 45 to 50 minutes. Serve warm. Makes 6 servings.

Butterscotch Apple Dumplings

1 recipe shortcake	1/8 tsp. nutmeg
4 med. apples, pared, cored	1/2 to 3/4 c. brown sugar
1/2 c. sugar mixed with	1/3 c. butter
1 tsp. cinnamon	Dash salt
	2 c. boiling water

Follow directions for making shortcake. Divide dough in half. Roll each half 1/8-inch thick, making square sheet about 10 by 10 inches; then cut in 4 squares, 5 by 5 inches. Place apple half on each square. Sprinkle each with 1 T. sugar-spice mixture. Moisten edges of dough and bring corners up over apples, pressing edges together. Place in greased pan about 13 by 9 by 2 inches, having joined edges of dough on top or underneath. Mix together brown sugar, butter, salt and water and bring to boil. Pour over dumplings in pan. (Or use a fruit sauce.) Bake in moderate oven (375° F.) 45 to 50 minutes. Serve warm. Makes 8 dumplings.

Fruit Shortcake

3 c. sifted flour	1/2 c. shortening
4 tsp. baking powder	1 c. milk
1 tsp. salt	Soft butter
3 T. sugar	1 to 1 1/2 quarts prepared fruit

Sift together flour, baking powder, salt and sugar. Cut in shortening until mixture looks like coarse meal. Add milk, mixing until soft dough is formed. Knead dough on lightly floured board half a minute. Divide and pat 1/2-inch thick in two greased pans. Bake in hot oven (450° F.) 20 minutes or until done. Put shortcake together, spreading each layer with softened butter and prepared fruit generously between layers and over top. Makes 8 to 10 servings.

Apple Pinwheel Cobbler

1/2 recipe shortcake	1/4 c. sugar mixed with
1 T. melted butter	1/2 c. brown sugar
2 T. granulated sugar	1/2 tsp. salt
1/2 tsp. cinnamon	1/2 tsp. cinnamon
2 qts. apples, thinly sliced	1 T. vinegar
	1/2 to 3/4 c. water

Follow directions for making shortcake dough (above). Roll 1/4-inch thick, making oblong sheet about 12 by 6 inches. Brush with melted butter, sprinkle with 2 T. sugar and cinnamon and roll as for jelly roll. Slice roll into 8 pinwheels. Place apples in shallow greased baking dish and sprinkle with sugar mixture. Add vinegar to water and pour over apples. Arrange pinwheels on top, spreading slices to cover apples. Bake in hot oven (400° F.) 15 minutes, then reduce heat to moderate (350° F.) and bake 30 minutes longer, or until apples are tender. Makes 8 servings.

Snowballs

1 c. flour	1/4 c. butter
1/4 tsp. salt	1/2 c. sugar
1 tsp. baking powder	1/4 c. milk
	2 egg whites

Sift flour, salt and baking powder. Cream butter; stir in sugar gradually. Stir in sifted dry ingredients alternately with milk. Fold in stiffly beaten egg whites. Fill buttered custard cups two-thirds full of batter; fasten waxed or oiled paper over tops with elastic bands; steam 45 minutes. Unmold and serve with sliced sweetened peaches or hard sauce.

Indian Pudding

3 c. milk	1/4 tsp. cinnamon
1/4 c. corn meal	1/3 c. molasses or brown sugar
1/2 tsp. salt	
1/2 tsp. ginger	1/2 c. cold milk

Mix dry ingredients in top of double boiler; add 3 c. milk and molasses and cook over boiling water for 30 minutes. Pour mixture into uncovered baking dish; bake in slow oven (300° F.) for 1/2 hour; stir two or three times during this period. Pour 1/2 c. cold milk over pudding; bake without stirring for 2 to 2 1/2 hours longer. Serve with hard sauce or whipped cream. Serves 4.



Souffle and sauce are combined in this French-inspired chiffon pudding.

Fruit and the Birds

by E. M. MARSHALL

Some ideas which may help you to get better results from the fruits you plan to have in your garden

"I'M going to correct the mistakes I made in my first fruit garden," a friend told me when I called to find her, out measuring a plot of ground that still held traces of snow and mumbling what sounded to me like "Fifty by fifty."

"It's too early to plant anything..."

"I'm just getting ready," she replied. "This plot is bigger so I can have more varieties." She looked at a small book which she had pulled from the pocket of her coat. "I have here some notes—suggestions on how to get the most from my fruit garden. I'm going to change some of the varieties to suit our family's tastes."

I must have looked bewildered for she went on to explain as we walked through the light snowfall, back to the house: "At the corners, I'll plant three apple trees and a pear tree, all of them having four grafts apiece, so I'll get early and late varieties. In the center we'll have a sweet cherry tree. They say that this arrangement will give the best results and without too much pruning even when the trees are 30 years old. We'll have three peach trees, a plum or an apricot tree in between those on the corners. Peaches and plums do not take up as much space as do apples and pears.

"Then I'll have rows of berry bushes underneath. They suggest starting with red raspberry plants set three feet apart. We'll get in a row or two of blueberries and perhaps a few currants or gooseberries."

She again consulted her notes to read off, "Raspberries, blackberries, dewberries, currants, gooseberries and blueberries will bear some fruit the first summer and will do better the second year and thereafter. Grapes won't bear until a year after they are planted. Peaches and nectarines bear a little the second year but usually require three summers. Plums, apricots and sour cherries bear a little the third year but usually take as long as sweet cherries and pears, four years. As for apples, they vary the most for they take from two years to ten to get underway."

"If you select both early and late varieties for the grafts, you ought to have a continuous supply, particularly of apples," I said.

"I'm going to. We'll have yellow transparent for they're the earliest variety I know anything about. Gravensteins come next, I think. But we'll keep mostly to kinds which will keep all winter for we all love apples like Northern Spies, Baldwins, Golden Delicious, McIntosh, Jonathans, Canadian Reds."

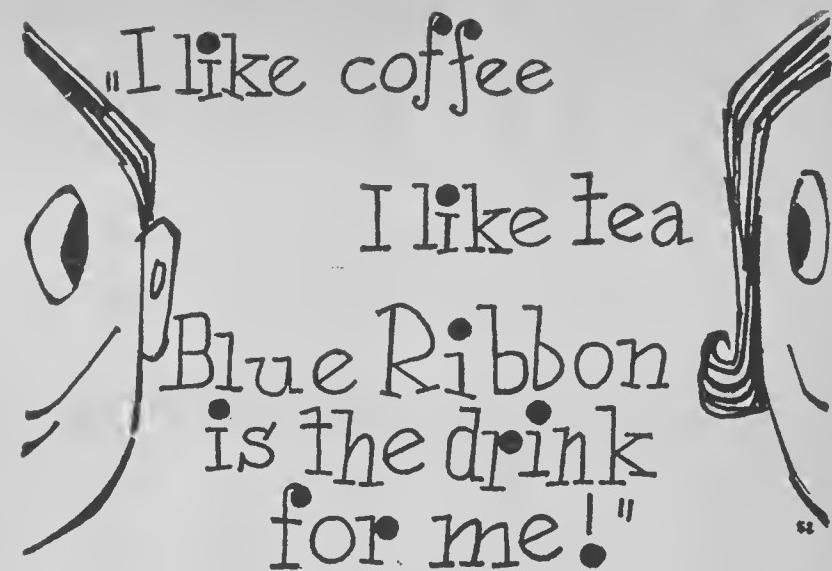
"With so much fruit around, you are sure to have trouble keeping birds away. They love fruit too," I said.

"I'm going to try some of the tactics my grandmother used to scare them off. Grannie tied rags on the limbs of her cherry trees so they would flutter in the breeze and scare off the robins, who came robbing her fruit."

"Fine!" I replied, "and try stringing up a few mirrors so they will catch the rays from the sun as they dangle

and spin about. I've heard that they are even better than rags and that's a good way to use the mirrors which come with pocketbooks and compacts. My aunt used to take small potatoes, stick six or seven feathers into them and hang them in her trees. She thought that worked best. I've a neighbor who hangs discarded light bulbs in his fruit trees. The wind swings the branches and the bulbs flash in the sun, so that they too warn off the birds."

V



CROWN BRAND

on Bread or Toast



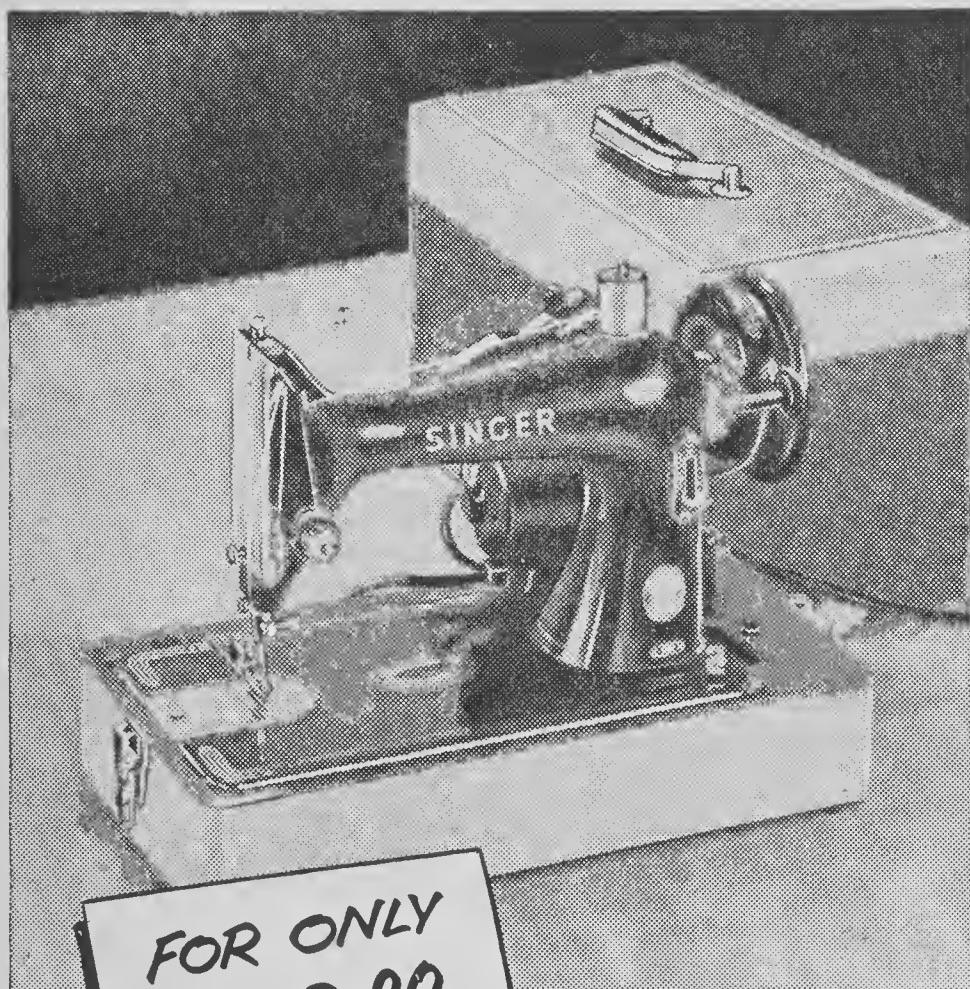
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Address orders to The Country Guide Needlework Department, 290 Vaughan Street, Winnipeg 2, Manitoba.

Countrywoman

Continued from page 59

also has assigned the illustration of five other books intended for supplementary school reading, wrote a letter to a friend and admirer of Annora Brown, stating: "She is, in my opinion, one of the most competent illustrators we have in the West and incidentally, a most charming person."

Working as she does in a home studio, in a small town, 100 miles south and west of Calgary, she is under some disadvantage: she does not have the stimulation of frequent chats with other artists nor the opportunity to view their work; to exhibit her own for sale, nor access to public library service for resource material required by an artist or writer. But these may be offset by certain other requirements in creative work: quiet concentration on work with a lack of the social and business distractions which an artist living in the city experiences; possibly greater opportunity to develop an individual style; a close familiar contact with the flowers and the other objects which she paints.

ANNORA BROWN prefers to paint rather than to teach. That, of course, means that her livelihood depends on actual sales of her work. Those who view her paintings and illustrations cannot help but note that she employs modern techniques and treatment—that there is story and design in most of her paintings, a human figure or a horse seems to move rather than to be a static portrait study. On a visit to her home last July I noted some of these features and enquired as to why she selected Design classes to attend rather than general Art. After a few reflective moments she said with a quiet laugh:

"I chose Design, I suppose, because my purpose was not so much to learn art as it was to do justice to the flowers, which I knew and wanted to paint."

That point was further explained in a brief talk which she gave to a women's club meeting in Winnipeg on January 8 of this year—where over 130 people heard Miss Brown speak, viewed about 20 of her paintings and her large collection of colored slides. She said then: "Flower paintings amount to about one-half of my painted subjects. For awhile I was rather puzzled about the background

and realized that I had to work out a solution to the problem. When I look at a flower, I think in terms of poetry and music so I tried to express rhythm of a poem and the harmony of music in color and movement in fanciful touches to the background space."

If it were possible to present the pastel painting "Brown-eyed Susan" in its original rich tones of yellow and brown the reader would be enabled to understand how Annora Brown conveys a sense of harmony between the main figure and its surrounding background.

The occasion marked her first visit to Winnipeg. She was guest for a month with Mrs. J. G. Hunt and Miss Doris Hunt, a teacher of French in Daniel McIntyre high school. Doris Hunt had previously taught in Mount Royal College, Calgary, and had gone on sketching expeditions with Miss Brown, taking along camping equipment, making their meals over campfire and sleeping in a tent or simply in bed-rolls with the night sky for a canopy.

When Annora Brown travels, she carries along a sketch pad and quickly enters sketches to note things which interest her and which may be useful later, when working on the composition of a painting. These may be: a landscape outline, some feature which can be fitted in, a grove or a single tree, a plant at bud, blossom or seed-pod stage. She works quickly in pencil, adding brief written notes as to location, date, etc. She says that her memory of color is stronger than of structural detail. She has many such notebooks, gathered through years of observation.

Doris Hunt quickly became an admirer of Annora's work, then a pupil and a staunch public relations supporter for the artist. She wrote an article on "The Art of Annora Brown" which was published in Canadian Review of Music and Art, of January, 1945, illustrated by black and white reproductions of four of her paintings.

The warm and appreciative response to Miss Brown's paintings and herself surprised and encouraged her. One gratifying result was that 16 of the paintings were purchased by Winnipeg people before the artist left for her home. It is a regret that arrangements are not made for travel and exhibition expenses, so that the work of leading Canadian artists can be displayed in the larger towns and cities across Canada. V



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Cream

1/3 cup butter or margarine

Blend in

1/2 cup granulated sugar
1 1/2 teaspoons salt

Blend in, part at a time

2 well-beaten eggs

Add the yeast mixture and

1 teaspoon vanilla

Stir in

2 cups once-sifted all-purpose flour

and beat until smooth and elastic.

Work in an additional

2 1/4 cups (about) once-sifted all-purpose flour

Turn out on lightly-floured board; knead until smooth and elastic; place in greased bowl. Brush

top of dough with melted shortening. Cover. Let rise in warm place, free from draft, until doubled in bulk—about 1 hour.

Meantime prepare and combine

3/4 cup finely-crushed cracker crumbs

1/2 cup blanched almonds, finely ground

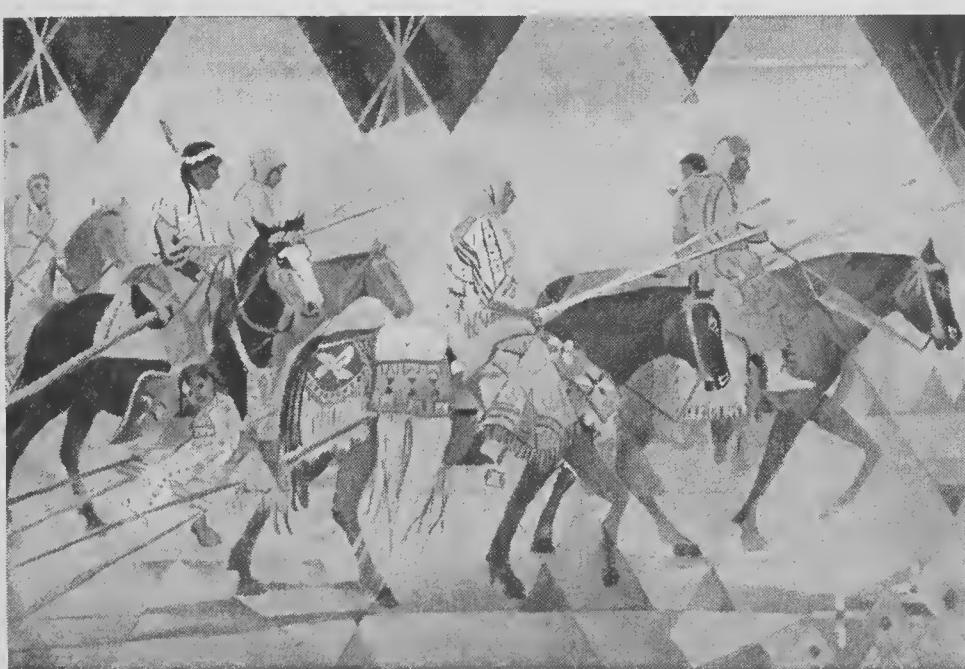
3/4 cup granulated sugar

1 slightly-beaten egg

2 tablespoons water

1 1/2 teaspoons almond extract

Punch down dough. Turn out and halve the dough; set one portion aside to shape later. Roll one portion into a 12-inch square. Spread 2/3 of square with half the crumb mixture. Fold plain third of dough over crumb mixture, then fold remaining third over top—making 3 layers of dough and 2 of filling. Cut rectangle into 18 strips. Twist each strip twice; place on greased cookie sheet. Press 2 or 3 blanched almonds into filling of each twist. Brush with melted butter or margarine; sprinkle with sugar. Shape second portion of dough in same manner. Cover. Let rise until doubled in bulk—about 1 hour. Bake in moderate oven, 350°, 20 to 25 mins. Yield: 36 twists.



"Peigan Indian Travois"—at the encampment, owned by a Winnipeg friend.

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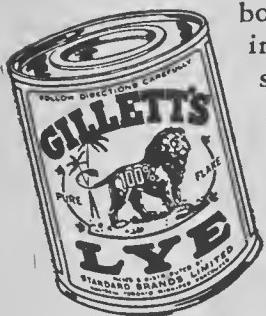
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CANADA

The Problem Child

Early recognition of the nature of a child's emotional disturbance is important, if parents are to assist him in overcoming behavior patterns which cause him to be a misfit in the family circle

by EDWARD PODOLSKY, M.D.

CHILDREN, like adults, may become disturbed emotionally because they have not been able to adjust to everyday commonplace situations. Because of some persistent and underlying fear, they may behave in a manner that is neither socially useful nor acceptable. They may fail to act in the best interests of the group in which they move because of inner conflicts and tensions.

In behaving the way he does, the frightened problem child hopes to accomplish one or more of the following: attract attention to himself because he feels frightened and isolated when no one is paying attention to him or noticing him as an individual. Satisfy himself that he amounts to something, that he does possess some degree of significance, because the overwhelming feeling of unworthiness and inferiority he has is frightening to him. Discharge his resentments against those whom he fears. Often such a child will give up in complete discouragement because he lacks the emotional strength and resiliency to engage in constructive behavior.

Children generally use some means of gaining attention either because of fear or loneliness. In this way they can ease intolerable inner tensions. Obviously, the very young child cannot engage in socially useful or acceptable activity. The only way he can feel accepted and appreciated is to be noticed and praised.

A frightened child needs constant proof of his acceptance. He hungers for continual demonstrations of affection and goes out of his way to draw attention to himself. However, these fail to give him a feeling of strength, self-reliance and self-confidence. Because of his fearfulness, he always requires new proof that he is still being accepted. When he is old enough he will experiment first with socially acceptable methods of gaining attention. When these fail he will embark on a course of action that is annoying and disturbing.

For a time the parents may tolerate such actions without doing anything about it. But if this behavior persists, the parents begin to lose patience and start punishing the child. However, the frightened child is prepared to accept even drastic punishment. Most children prefer to be beaten rather than ignored. At least it means the child is receiving some sort of attention, however painful. To be ignored and treated indifferently is the worst possible experience for such a child.

At some point, the child changes his goal and he and his parents may reach a stalemate. The child tries to convince his parents that he can do what he wants to and they cannot stop him. Or he may try to show them that they cannot bend him to their will. Should he succeed, his point is won, for he has attracted attention, which was his purpose in the first place. If, however, he does not succeed, he will use other and stronger

means to attain his goal. His maladjustment becomes more obvious, his actions are more hostile, and his fears are intensified.

If neither side in this struggle between the child and his parents gives in, the tug-of-war grows more intense and bitter. The parents resort to all sorts of ways to punish the child and subjugate him. Mutual hatred and antagonism flare up. Things may become so bitter that no pleasant experience is left to maintain a feeling of belonging or friendliness.

Now the frightened child becomes vengeful. Because of the fear gnawing at him he wants to hurt others, to revenge himself on them. He has no further hope of gaining attention. If he cannot make others love him, he can at least make them hate him. Such children may be violent and even vicious, not because they are naturally evil, but because they are frightened. Fear generates cunning. The child knows where it will hurt his opponent the most and he takes full advantage of the knowledge.

Being discouraged as well as frightened, power and authority no longer impress him. He becomes defiant and destructive. Since he is quite certain nobody likes or cares for him, he takes to provoking anyone with whom he comes in contact. Wearing a chip on his shoulder, he regards it as some sort of triumph or achievement when he has succeeded in making himself thoroughly disliked. This dubious recognition serves as a temporary antidote to his fears.

The frightened child who is of a passive nature will not engage in open warfare. If his antagonism is successfully beaten down, he may be discouraged to such an extent that he gives up entirely and ceases to hope for any recognition whatsoever. Since his hostility is not shown openly, he may provoke less antagonism. Nevertheless his maladjustment is fully as serious as that of the child who is frankly hostile.

ACCORDING to Dr. Rudolf Dreikurs, Professor of Psychiatry at the University of Illinois, maladjusted or problem children may be classified as active or passive and may either use constructive or destructive methods, depending on the feeling of being accepted or rejected by others. Active or passive behavior indicates the amount of courage the frightened child possesses. Passivity is always based on personal discouragement. The combination of the two factors leads to four different types of behavior patterns: active-constructive, active-destructive, passive-constructive, and passive-destructive.

This sequence is based on the actual progression of the maladjustment in the frightened child. The tendency is to regard an active-destructive child as being much worse than a passive-constructive one. How-

(Please turn to page 70)

Fashion Forecast

No. 1923—A preview of styles to come—graceful coat to top a surplice-empire sheath. Dress has short sleeves, cross-over bodice, slimming six-gore skirt. Coat lined with dress fabric shows unmounted $\frac{3}{4}$ -length sleeves. Specially designed for women 5'3" and under. Sizes 12 $\frac{1}{2}$, 14 $\frac{1}{2}$, 16 $\frac{1}{2}$, 18 $\frac{1}{2}$, 20 $\frac{1}{2}$, 22 $\frac{1}{2}$. Size 16 $\frac{1}{2}$ coat requires 5 $\frac{3}{8}$ yards; dress, 4 $\frac{5}{8}$ yards (36-inch material). Price 50 cents.

No. 1935—In long or short versions, this jacket is tops for spring. Features are: raglan sleeves, rounded collar, roomy patch pockets, straight-cut back. Can be made "convoy coat" style. Separate matching hood with button closing completes outfit. Sizes 4, 6, 8, 10, 12, 14. Size 8 requires 1 $\frac{3}{4}$ yards 54-inch material for coat and hood. Price 35 cents.

No. 1927—Here is an important fashion headliner—the bloused suit dress. Features stand-away collar, bracelet length sleeves, button front, slim or unpressed pleat skirt. Blouse fits smoothly over hips for trim look. You will love the casual air of this outfit, yet its "special" appearance. Sizes 12, 14, 16, 18, 20. Size 16 requires 5 $\frac{5}{8}$ yards 36-inch material. Price 50 cents.

No. 1700—This dress could be adopted by your club as its 4-H dress. Features revere collar, unmounted "little boy" sleeves, button front, full skirt of unpressed pleats. The 4-H crest can be worn on pocket. Directions for crocheted beanie given in pattern. Simplified step-by-step instructions for beginners. Sizes 10, 11, 12, 13, 14, 15, 16, 18. Size 13 requires 4 yards 36-inch material. Price 35 cents.

No. 1941—For fair little ladies, a charming coat, hat and dress ensemble. Coat features small collar, flap pockets, front fullness, pleated panel at back. Dress has dainty puffed sleeves, peter pan collar, ribbon-fastened bodice and full pleated skirt. Line coat with dress fabric for special effect. Toddlers' sizes $\frac{1}{2}$, 1, 2, 3. Size 1 dress requires 1 $\frac{3}{8}$ yards 36-inch material; 1 $\frac{3}{8}$ yards 54-inch material for coat and bonnet. Price 50 cents.



No. 1937—Cropped jacket and pert cape accompany these two pretty dresses. Just right for party occasions now, for general wear this summer. Dress has rounded neckline, fitted bodice, full gathered skirt. May be made sleeveless or with short sleeves. Outfit completed with simple-to-make scalloped cape or dainty cover-up jacket with $\frac{3}{4}$ -length sleeves. Sizes 1, 2, 3, 4, 5, 6. Size 3 requires 2 $\frac{1}{4}$ yards 36-inch material for dress and jacket. Price 35 cents.

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Problem Child

Continued from page 68

ever, this is not always the case. If a child's antisocial attitude is not too far gone, as in the early stages of attention-seeking, he can be induced with relative ease to change his destructive methods into constructive ones. On the other hand, it is quite difficult to change a passive child into an active child. To be sure, the frightened passive-constructive child is less of a nuisance. But he needs much more assistance to develop the courage and self-confidence that will overcome his fearfulness.

While the frightened active-constructive child is more appreciated by those about him, he is actually not as good as he seems to be. He is trying very hard to make an impression because he needs some show of appreciation to ease his fears. Should he fail to attract attention, he begins to misbehave and his shortcomings are at once apparent. With his fears aggravated, he feels impelled to employ drastic measures.

There is no doubt that the frightened child who develops active-destructive methods to attract attention is emotionally distraught. He becomes a clown or a show-off and uses every device at his command to attain his goal. If he succeeds in attracting attention and easing his fears, his behavior reverts to normal.

Another type of frightened child is the one who uses passive-constructive methods for the same purpose. So subtle are his actions that many parents and teachers do not recognize that he is frightened or even that he is not behaving as he should. He is very pleasant, full of charm and quite submissive. These traits are found more often in girls than in boys. Boys who manifest them are considered effeminate. Though such a child may not be as hard to take as the active-destructive type, he nevertheless requires careful guidance. He, too, is a frightened child who is engaging in behavior that is not quite normal.

A child who seeks attention with passive-destructive methods generally feels so keenly rejected that he becomes completely frustrated and discouraged. His bashfulness, instability, lack of concentration, self-indulgence and frivolity, his marked fearfulness, his eating difficulties and his backwardness in taking care of himself make him the most difficult to handle.

THE frightened child does not know why he behaves in a certain way. It is quite useless to ask him, "Why did you do that?" When he answers, "I don't know," he is telling the truth. He is capable neither of analyzing his actions nor of understanding the feelings that motivated them. He is merely following his impulses.

The child should be made aware of the purpose behind his behavior, but the explanation must be couched in terms he can comprehend. Telling him that he is afraid, or lacks confidence or feels rejected or guilty will have little or no meaning for him. These may be the real and true reasons, but the child is not acquainted with psychology. However, when his purposes and goals are made clear to him, his reaction

may be entirely different. He may not acknowledge this verbally, but his expression gives him away. In a very young child, the change in behavior is often immediately apparent.

The best approach to the child is a friendly and sympathetic manner. He must never be belittled, nor should the discussion of his behavior be permitted to strike him as a fault-finding lecture. It is inadvisable to make definite statements. Some tentative leading remark, such as, "I wonder if you aren't a little afraid of something," is a good way to begin the talk.

Treatment has already begun when the child recognizes the goal in his misbehavior. Children who strive for attention will learn to become independent when they realize that contributing and not receiving is the most effective way of gaining freedom from fear. Every attempt should be made to help the child become active and change his destructive methods into constructive ones. When he feels reassured, wanted and a real part of the group in which he moves, he will lose his fears and behave in a socially acceptable manner. V

Make a Dish Garden

Reproduce a scene, some favorite spot or an imaginary one to blend with the color of a room's furnishings

by ELSIE MOOR McPHEE



A SEASHORE in your living room or a jungle on your dining room table can become a reality through the fascinating hobby of dish gardening.

A dish garden is actually a picture in a dish, a growing picture consisting of earth, plants, and usually water and figurines. You may want to reproduce a scene from a book you have read, a hunting or fishing scene or a favorite vacation spot. You probably have most of the materials needed for such a dish garden right in your own home. The most important thing to remember, and perhaps the only set rule in dish gardening is *Don't overdo it*. The simplest dish pictures are often the most arresting.

The frame for your growing picture is a shallow dish or tray. It may be a humble cake pan enamelled to the desired color or a fine pottery dish. Dull colors such as greyish blue, dull green or brown are best to start with, though you may try bright ones as long as the color of the dish and its contents compliment each other.

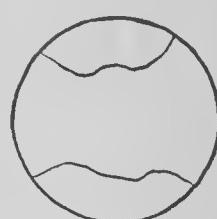
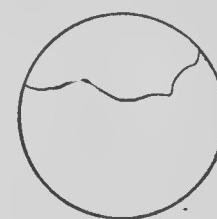
If you are a novice dish gardener, try a desert scene first. For this you need only a dish of fine earth covered with a layer of fine washed sand. If you want to make an oasis, sink a small plant, pot and all, into the sand and fill in the space at the base with moss. Then carry out the theme you have in mind, a caravan perhaps, with figurines purchased from the dime or china store, or animals and figures made from plasticine or self-hardening clay.

For a dish picture with a section of water, such as a cabin by a lake, you will need a retaining wall built

of small stones or ordinary coke held together with a cement and water mixture of stiff, muddy consistency. A little fine sand added to the cement mixture makes it easier to work. On the other hand, should you wish to remove the wall from the dish later on to make a different garden, it can be removed easier if no sand is added. If this is your first try, you might like to mark the plan of your wall on the dish with pencil or charcoal before you start, and practice building the retaining wall with plasticine. When you feel you have the desired effect, use an old knife or spoon to apply the cement to the stones as inconspicuously as possible, building a wall that is rough and irregular but watertight, and the same height as the container.

Your garden will need drainage. For metal containers make holes in the bottom; for pottery, lay in a layer of charcoal and pebbles. Now fill in the section you wish to be land with good, well-sifted earth. Now your land is ready to plant. (Later on, put water in the other section.)

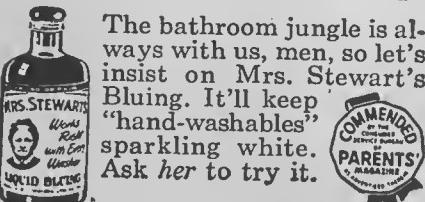
Moss is the best covering for the soil. You will find suitable clumps in the woods and on stones. For variety, you might plant lawn grass or timothy. Because your garden is so small, you must choose plants that will compliment their miniature setting, so if you have trees in your dish picture, choose from tiny evergreens, houseplants such as ferns and rubberplant, and dried foliage. Experiment too with sprouting vegetables. If you can't de-



Mark in plan of retaining walls.



"Well, anyway, this mess is brighter since she switched to Mrs. Stewart's Bluing."



cide where to put your chosen plants, use twigs to show you where your plants would look best.

Dish gardens need little care. Those with a retaining wall and section of water will water themselves as the moisture seeps through into the earth. A cheap atomizer is best for watering dish gardens without a water section. Some dish gardens will need sunlight, others will not.

If the water section gets dirty, clean it out with a sponge and add fresh. Should the moss grow brown or moldy, simply renew it.

If you tire of your particular garden, or if it is not satisfactory, clean out the entire bowl and start over. Any retaining walls can be removed with a little patience and a broad-bladed knife.

Recreation Choice

by HELENA SINGLETON GREEN

FOR many women the word "recreation" brings to mind such occasions as a movie, bridge party, dance, or a journey — events often inaccessible to the average farm wife. And some there may be who are apt to lament the fact that such familiar forms of recreation are not readily available!

If we would only realize it, women who live in the country actually have a wealth of recreation at hand. Besides cultivating an awareness of the beauties of Nature, we could also avail ourselves of the adventures such surroundings offer, at practically no cost in dollars and cents.

A neighbor told me of one day taking a little excursion which has left memories more lasting and lovely than any of the forementioned forms of recreation. The winter sun had smiled all morning on a white world, studying the crisp snow with diamonds. Her husband and two helpers were cutting timber on an island in the nearby lake. It was customary for one man to bring a load of wood to the house near noon and to pick up the men's lunch. On this particularly beautiful day my neighbor wrapped a big pot of hot stew and mince pies in newspapers and rugs, and packed the rest of the meal. She then bundled up her wee son and daughter, four and three years old. All three rode on the sleigh to the lake, then over its smooth surface to the island. Her husband built a fire in the shelter of a large rock. What a picnic the little group had! It was one that is still remembered years later.

Last autumn I went duck hunting with my husband on the first morning of the open season. I don't shoot, but I wanted to see the sunrise, and hear the sounds of the woods' creatures awakening. How often do we take a quiet time to see and hear such things? Believe me, it is well worthwhile. Duck hunters seem to sleep with one eye open and are awake when the night is only about three-fourths gone. This part I can't claim to have enjoyed so much. A substantial breakfast was in order, so I did my part there.

A dense early-morning fog had settled over the lake, so thick that one felt walled in by clouds just ten feet from shore. We didn't dare use a motor for fear of getting lost, so rowed

the boat a short distance from the cabin to the bay where "blinds" had previously been built. A blind is a hiding place, made of cedar boughs and shaped similar to the snow forts children build in winter. We landed about a hundred feet down shore from the first blind, so that the ducks would not be frightened away by the boat. It sounds simple to say we walked that hundred feet through the woods to the first blind, but in the dark and fog, and wearing unusually heavy warm clothing, I admit it was quite a feat.

We arrived at the blind and I was left here to do wildlife observing. My husband went on to the second blind, warning that no matter what happened I must be quiet. After I got my breath I began to take stock of my surroundings. I sat on a large flat stone, with a tree for a backrest. At first all was dark and still. Then from close by came the weird, lonesome "Who-o-o" of one of our large owls, a sound repeated several times before he flew away. If that had been the only pleasure of the morning it was worth the early rising; never before had I been so close to a large owl.

Now and then, out of the still forest behind me came the call of a whip-poor-will, and as the first streaks of dawn appeared first one then another and another of the birds' morning songs could be heard.

My husband says that if you keep still enough in the woods it is amazing what you can see and hear. Several times that morning little birds hopped about on the branches of the blind, almost within reach of my hand. When it was light some ducks came to the bay to feed. Two lighted in the water just in front of me. I kept still. Later they swam away toward the other blind to be shot. The hunter got five that morning.

I have mentioned only two pleasures of the many available to us in the country. Multiply them by dozens... they would add immensely to our health and happiness. Our private petition could well be: "Lord, grant to us, country women, an awareness of the beauty around us and of the opportunities for happy, healthful recreation that it affords."

Hints

To remove candle wax from table linen first gently scrape the hardened wax from the surface of the cloth with a dull knife. Then sponge the stain with cleaning fluid, as you would treat any grease spot. If any traces of color remain, they usually can be removed by sponging with a cloth dipped in a mixture of two parts water to one part rubbing alcohol. When using cleaning fluid it is advisable to work outdoors or in a well ventilated room.

* * * * *

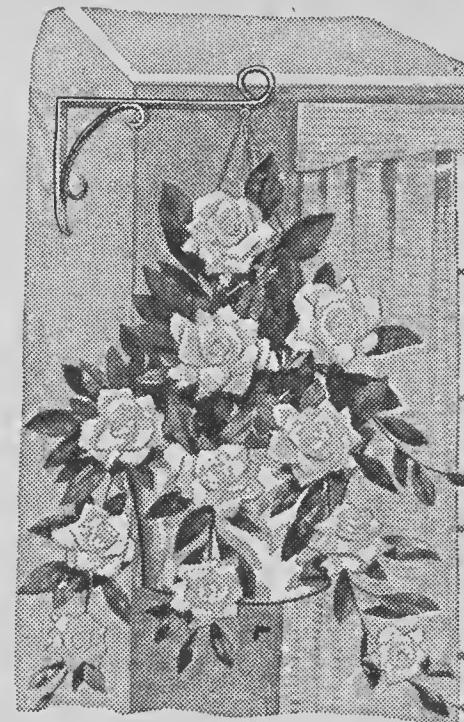
Ice trays that stick in freezing unit of a refrigerator can cause minor kitchen accidents. Next time the trays are out, coat the bottom of each with a film of cooking or salad oil. This will not prevent freezing but should facilitate removal of trays from unit.

To tighten cabinet or bureau drawer knob which frequently works loose, make a small washer-shaped piece out of fine sandpaper. Thread the piece onto the screw, with the sanded side next to the wood in order to give it "grip" and then tighten screw.

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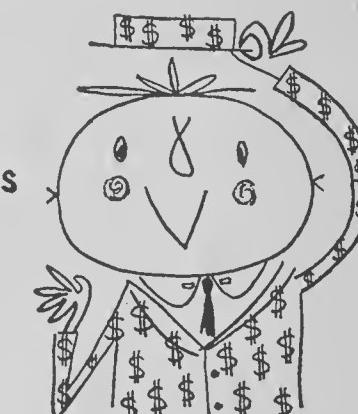
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The Country Boy and Girl

February sunshine brighter grows each day,
Telling that the winter, soon will pass away.



Here's a way you can keep your feet warm out at the pond. Have four medium-sized hot baked potatoes ready before you set off from home. Wrap each potato separately in newspaper and put two in each skating boot. After you have put on your skating boots at the pond, transfer the hot potatoes to your walking 'shoes. You'll have warm feet for the homeward journey.

Ann Sankey

Joe Boy

by MARY GRANNAN

IT was Andy's first circus. He sat with his father in a ringside seat. Clowns tumbled close to him, and Andy's laughter was loud and merry. When the drum rolled to announce that the parade was about to begin, his excitement knew no bounds. He stood up and cheered. He cheered the prancing ponies, and the lovely ladies. He cheered the camels and the palominos. He cheered the lions as they rolled by in their den wagons, and he cheered the elephants. Each act in the show delighted Andy, but his heart went out to a little performing monkey in the ring.

The monkey must have felt that Andy was enjoying his antics, because, suddenly he broke away from his trainer, leapt over the rail, and buried his head in Andy's shoulder.

"Joe Boy," called his master. "Joe Boy, come back to Pirandello."

But Joe Boy had no intention of going back into the ring. He had found a friend, and he was going to stay with him. The people who sat close by, laughed merrily, as Mr. Pirandello pried Joe Boy loose from Andy. "I think he likes me, Mr. Pirandello," Andy said.

"I think so too," said the monkey's trainer, "but he's a wicked little fellow. I don't know what has gotten into Joe Boy lately. Last week he ran away, and it was two days before I found him in a chicken coop at the edge of the town."

Joe Boy chattered impudently, as much as to say, "And I'll run away again someday." Andy shook hands with the little animal, who went back to the ring and finished his act.

Andy could talk of nothing else when he returned home. "Mum, you should have seen him. He had a face like a little man, and hands, too. He wore a little red velvet coat and a little blue cap, and there were brass buttons on his coat, which had pockets in it. Dad bought some peanuts for me, and I gave some to Joe Boy. He put them into his pockets, Mum."

Mrs. Wilson laughed. "The circus seems to have been a great success," she said.

JACK FROST is a busy fellow who works silently while everyone is sleeping. What wonderful pictures he paints on our windows—shining silver leaves and ferns—fairy palaces and towers! Have you ever tried to copy Jack Frost's window painting?

It's off to the pond for skating on Saturday afternoon after chores are finished! The nippy air sends color flying into your cheeks as everyone works with a will to clear off the ice. Skating is the best of fun.

Here's a way you can keep your feet warm out at the pond. Have four medium-sized hot baked potatoes ready before you set off from home. Wrap each potato separately in newspaper and put two in each skating boot. After you have put on your skating boots at the pond, transfer the hot potatoes to your walking 'shoes. You'll have warm feet for the homeward journey.

Her husband agreed. "We had a fine time. We saw lions and tigers, llamas and seals, but once Joe Boy came into the ring, all else was forgotten."

Andy nodded. "I guess that's because I liked Joe Boy best." He began to hop about, singing

*I wish that Joe Boy was my pet
I'd love to have a monkey,
I'd like one better than a cat
Or dog, or bear or donkey.
I wish he'd come and live with me
I wish he could be mine,
If Joe Boy Monkey were my pet
I think it would be fine.*

His mother laughed again. "Fine indeed! That's all we need around here. And now young man, it's time for bed. You've had a very full day."

Andy usually begged to stay up a little longer, but that night he was tired, and went to bed without question. He woke with the sun, the next morning. As he opened his eyes, he heard a chattering sound in the oak tree outside his window. He cocked his head to listen. "It's not a bird," he said to himself. "It sounds like Joe Boy, but it couldn't be Joe Boy."

The chattering continued. Andy got up and went to the window. It was Joe Boy. The little monkey was shivering in bare branches of the great oak tree. Andy opened the window wide, and called "Joe Boy! Here, Joe Boy."

The monkey leapt to the sill, and into the room. He took one look at Andy's cozy bed, and jumped into it and snuggled down under the covers. Andy laughed uproariously.

"What are you laughing at so early in the morning?" his mother called.

"At Joe Boy," answered Andy, still laughing. "He jumped in through my window and he got into my bed and covered himself up."

"Will you cover yourself up, too, Andy?" called his mother, "and tell Joe Boy I'd like to sleep another hour?" Mrs. Wilson yawned and said to her husband. "How can anyone play at pretending at this hour?"

Andy was still laughing when he went down to breakfast. "You should see him, Dad! He's curled up like a little kitten. What do monkeys eat, Dad? What should I give Joe Boy for breakfast?"

Mr. Wilson smiled. He could pretend, too. "Well," he said, "monkeys like Joe Boy come from South America, and they eat fruit and nuts. I'd suggest a banana."

"Do we have any bananas, Mum?" asked Andy of his mother.

"Andy, eat your breakfast dear, and let's stop pretending for a while," said his mother.

"Pretending? Did you think I was pretending Mum? Not this time! This time it's for real." Andy ran from the table and soon was back with Joe Boy.

"Where on earth did you get that monkey?" gasped Mr. Wilson.

"I told you, Dad! He came in through my window. He's mine now, isn't he? I wished last night he were mine, and I got my wish. Joe Boy likes me, and he wants to live with me."

Andy's father shook his head. "Andy," he said, seriously, "you remember what Mr. Pirandello said yesterday. He said that Joe Boy had been misbehaving lately, and that he had run away last week. He's done it again, and it was just by chance, that he happened to stop in our oak tree. He's not yours. We'll feed him, and then we'll call Mr. Pirandello."

Joe Boy's trainer was very grateful to Andy. "It was a very cold night," he said. "If Joe Boy hadn't gotten into some warm place when he did, it might have been the end of him. I'd like to reward Andy for taking care of him."

Mr. Wilson said "No."

"Then perhaps you'd let him ride in the parade tonight! I know how much a boy likes to ride on an elephant."

Mr. Wilson said "yes."

That night, Andy, in circus spangles from head to toe, rode an elephant in the parade. Joe Boy sat on his shoulder.

Perhaps you would like to have a "birthday" garden plot. Each month has its special flower, as well as a birthstone. Ask mother, when she makes out her order for seeds, if she would please include a package of your birth-month flower seed. Here's the chart: January (carnation); February (violet); March (jonquil); April (sweet pea); May (lily of the valley); June (rose); July (larkspur); August (gladiolus); September (aster); October (calendula); November (chrysanthemum); December (narcissus). —R. Gill.

Sketch Pad Out-of-Doors

No. 60 in series—by CLARENCE TILLENIUS



WHEN making a sketch, it often happens that there is not enough time to make a drawing complete in every detail, especially if you are working from a posing model.

If the sketch is to be used later in a more elaborate drawing it is probably better to get down the general shape of the whole figure even if you only indicate by a touch or two important details which should be more carefully studied.

For instance, in the accompanying drawing, the snowshoe binding fastening the moccasins is only indicated by a couple of lines. It could be necessary sometime to know just how this binding is fastened, so it would have been a good idea (after completing the

large sketch) to make a separate drawing of the feet alone, showing exactly how the hitch is applied.

Then perhaps another drawing of the snowshoes alone, paying particular attention to the construction—how the braces are set in, the pattern of the webbing and especially the shape of the frame. This may seem like work, and it is work, but after you have drawn a thing once in this way you will not easily forget its construction and you can draw it again when necessary without a model.

(Sketch Pad Out-of-Doors series now available in book form from The Country Guide, Winnipeg. Price postpaid \$1.00).

He Wanted to Drive a Snow Plow

Continued from page 10

WE just got through this drift, when the front wheels got off into the soft snow, and pulled the patrol over the edge of a six-foot grade. Well, we got down and looked the situation over. We didn't like what we saw, or felt either, for that matter, as it was 15 below. Stan got back in and tried to go ahead, but when the power hit the wheels, the patrol proceeded to skid sideways, with the result that it ended up sitting at a 45-degree angle, with little weight on the top wheels that just spun merrily around, not moving the outfit an inch. We knew we were beaten. We were lucky, though. It was 15 below all right, but there was no wind blowing, and it was only a mile to walk to Ben Roestie's place where there was a phone.

The inner man immediately spoke up and told us that Ben's good wife would get us a cup of coffee to help thaw us out, which by the way, having retired, she got up to do. The refreshments were really appreciated.

Phoned Howard Scheeler, foreman for the Ponoka area, and told him what the situation was. He put Paul Jess on the phone, who knew this area and Paul quickly figured out where we were. It was now ten o'clock, but he cheerfully got another patrol and started out our way, arriving about midnight. After an hour-and-a-half struggle, we got No. 12 up on the road.

As our fuel was getting low we worked our way back to Mecca Glen School and fueled up. When finished there, it was three o'clock and as the patrol had to work west of town the next day, I decided we had better keep going and finish up some outlying corners of the division.

When we got to Phil Reed's place at four o'clock, I stopped; and while Stan did a couple of hour's work, I got 40 elusive winks by the stove. When we arrived, Phil told me Andy Svingingsens had phoned, and that his road was badly plugged. They were nearly out of food and the cream cans were all full, a type of call you receive often.

When Stan came back at six, I took the unit while he got some rest, and went up to Andy's. There I found a half-a-mile drifted, most of it three to five feet deep. It took three hours to open it up. When I got to their house, I was asked in for a bit of breakfast, in spite of knocking down the gate post, when turning in.

After getting back to Phil's, Stan took the brute and went up to the north side of the division and opened up some 20 miles of road, arriving back at my place at five in the afternoon. I took over then, continuing the work, and arrived back at Ponoka at one-thirty Sunday morning. From three o'clock on Friday afternoon, to Sunday morning, we had opened up 100 miles of road, a mile-and-a-half of that being heavy drifts. Both of us knew we were tired.

A type of call that comes over the wire occasionally is that someone has to get to the hospital and the roads are blocked. Action is always prompt

then, and the finest of co-operation is received from our operators.

Another experience that is dreaded by the shop crew is to have a patrol operator call up from a point miles out, in temperatures far below zero, with word that a unit has broken down.

Twice last winter, Howard and his help had to spend the best part of a night working bare-handed to make a repair in 20- and 30-degrees-below temperatures. But the roads must be kept open.

Keeping the roads open is a service that the taxpayer appreciates; to such a degree, in fact, that it is not uncommon for a taxpayer and his wife to get up at any hour of the night and brew a cup of coffee and set out a spot of lunch for a night-working operator.

Last winter—a bad one—the snow plowing bill for the county was in the neighborhood of \$25,000. Say it that way and it sounds like a lot of money, but there are 2,500 farmers in the county and that works out to \$10 apiece. I am sure that the saving made in car gas alone, for each farmer, would amount to more than \$10, to say nothing of the wear and tear on the vehicle.

A springtime, small-boy delight is to find the first blade of green grass—the first crocus—the first buttercup. I know of a lot of councillors, county and municipal road crews that got a thrill out of seeing each of them last spring. Shucks, I suppose it will be floods and washouts in the spring, but at least it won't be 30 below.

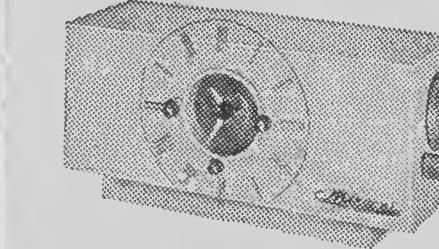
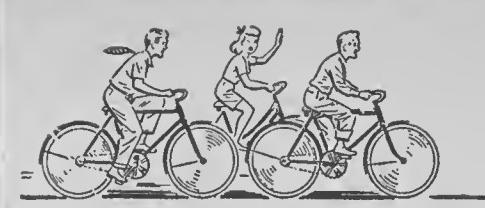
Experiment With Blow Sand



[Guide photo
Col. Shaw and the alfalfa yielding three growths per year on sandy bush soil.

COL. R. H. SHAW of Coldbrook, Nova Scotia, in the heart of the Annapolis Valley, has 150 acres of apple orchards. But on any tour through that well-kept orchard, he always stops to show his visitors what he calls "his proof that the region is forage country too."

He has a field, cut out of a pine bush, with soil of pure blow sand, growing lush alfalfa and brome grass. He seeded the field three years ago, out of curiosity. He applied 30 pounds per acre of boron, to correct a deficiency. He limed it. And he has been harvesting three growths of alfalfa a year from it since.



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Bells On Their Toes

Read this charming account of the Balinese and their gracious approach to the handling of livestock and fowl

by RICHARD HARRINGTON

Photos by the Author



The young Balinese plowman must work early, in the paddies of this small Indonesian island, where pigeons wear bells and demons and dancing abound.

TWO or three pigeons sprang into the air, and immediately a tinkling silvery sound arose. Round and round they swept, the swish of their pinions mingling with a melodious sound of whistling and tinkling.

What a charming thought—to attach small bells to the legs of their pigeons! The Balinese are extremely fond of music, but this was remarkable. When the pigeons alighted, I discovered they also had tiny bamboo whistles attached to their tail feathers. But the idea is more than music. The noise warns off preying hawks.

Bali, a small, beautiful island of Indonesia, has rightly been called "magic." It's a land of temples, of gods and demons and witches, of children performing graceful, difficult dances. Even the domestic creatures have a sort of fairy-tale quality. They have the drollery of creatures from a Disney film, with their mild eyes and knowing ways.

The slender-bodied cows remind you of graceful deer. They are small animals, light brown in color, with white pants. Like our elk, they have two white patches at the rear, quite conspicuous in their silky coats. At night the cows roam the roads, and Bossy's rear-patches have saved many a driver from a midnight collision.

Big black—or pink—water buffaloes have their own aura of fantasy. Great plodding creatures with flat, back-swept horns that end in wicked points, they allow a small boy of five to lead them around by the nose. They have other attendants in the form of birds that wander all over their backs, picking up flies and insects.

Or, if the bugs get too bad, the water-buffalo submerges like a hippo-

potamus, only the tip of his snout showing. But let this placid creature get a whiff of a white man, and the gentle eyes become surcharged with red. The erstwhile peaceable, domestic buffalo is apt to charge without a second thought.

One day a small boy showed up, with a bandage around his leg where a startled buffalo had gored him.

"Oh, how cruel of the buffalo, when you love it so much!" exclaimed a sympathetic tourist.

"Not cruel," said the youngster sensibly. "That is its nature."



Pigs, all sway-backed and white-bellied, are the responsibility of the women on Bali farms. Also, no man feeds chickens, and no woman dare tend the ducks.

Until very recently, buffalo races drew huge crowds in Bali. This was part of the festival to celebrate the rice harvest. The lumbering beasts, polished, adorned with flowers and bells, were raced in honor of the gods. The race was not to the swift, however. In true Balinese style, the winner was the one that showed best form!

Even the pigs don't look quite credible, as though the artist's hand had slipped in drawing this cartoon. These are black, or dark brown, invariably with a white belly that looks as if the animal had dragged through flour.

These pigs, descendants of jungle swine, might have been run over by a tank truck. The backbone sways downward to such an extent, that front and rear ends seem to act independently of one another. But the porker is assured of good eating, and in turn makes good eating. This is strictly women's work. Men never have anything to do with taking care of the pigs, while women are not allowed to look after the cows or buffaloes.

The men look after the geese and ducks, too.

The long-necked geese march along the roads with a particularly haughty air. Geese usually seem to disdain things around them, and the Chinese breed found in Bali have the supercilious manner to a high degree. Of course, the big yellow bump on the bill adds to a natural superiority.

But the ducks are the darlings of the lot. Morning and evening, you'll find plenty of them along the roads, being shepherded to or from pasture, by a tottering grandfather, or often a small boy. The duck-shepherd carries a long staff of bamboo, with white rags fluttering at one end, which he uses to guide them.

Wherever he sets up his staff, the ducks know is the rendezvous for the evening. Off they go into the paddies, grubbing for small water creatures with their tails in air.

These are Indian Runners, ducks that scuttle along with a queer light step in an erect position. But these have an additional tuft of white feathers on their heads, just to be

different. After the usual five o'clock bathe, the boys come for their charges. All through the rice paddies, you can see ducks shaking the water off their tails, assembling each to its banner. It's an amazing sight.

Sometimes the ducks string out single file on their way home, especially as they duck-step along the narrow dikes that form the paths through the rice fields. Sometimes they bunch up, small armies of brown ducks talking earnestly to one another, a cohesive group that never mixes with the next platoon.

They make very good time along the road.

An impatient tourist bored with being held up by flock after flock of ducks, kept saying to his driver, "Honk your horn at them, so they get out of your way." But the driver refused, gently, "They're already going as fast as they can," he said reasonably.

You never see a woman tending ducks, nor a man throwing grain to the hens. Hens and chicks are women's domain.

But not the fighting cocks. These long-legged gamecocks are the pride and delight of males young and old. They pet and feed their iridescent

What's the use? Yesterday an egg, tomorrow a feather duster.—Mark Fenderson.

cocks, talk lovingly to them, and massage their legs to make them strong. Every day, they set the wicker cages out beside the road, so the cock can enjoy the passing parade.

Large sums are wagered on the cockfights, which last only a few minutes before one is killed by the razor-sharp knives attached to the spurs. Then they eat the cock for dinner that night.

"You don't have cockfights in your country?" they asked with a sense of shock. "Just raise them for meat and eggs? Ah, how very dull their lives must be!"

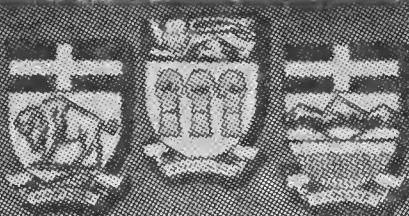
Ventilation Helps Grain in Storage

GRAIN stored over long periods may maintain its grade longer if the bin is ventilated to control moisture conditions, according to results of research work done by H. H. Delong, professor of agricultural engineering at the South Dakota State College Agricultural Experiment Station.

When air in the storage bin begins to cool in the fall, the warm air from the center of the grain rises to the top of the bin where it allows moisture to condense on the cool surface. This condition can cause a lowering of grain quality through spoilage.

Professor Delong experimented with both fans and special cupolas (wind ventilators). In the center of the bin he installed an eight-inch pipe vertically, the bottom end of which contained holes to allow the air to circulate through the grain. The fan was attached to the top of the pipe, and the exhaust air was piped outside.

It was shown that the use of a 50 cfm. fan with automatic controls, or the installation of a cupola of the proper size and type, could reduce moisture condensation and, thus, prevent grain spoilage.



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Place of Farming In Canada's Economic Prospects

THE preliminary report of the Gordon Royal Commission on Canada's Economic Prospects was tabled in Parliament on January 10. It contains many forecasts and proposals pertinent to agriculture. Some of the most significant of these may be summarized as follows:

FORECASTS. The domestic market will increase substantially over the next 25 years. Based on a net immigration of 75,000 persons per year, population is expected to rise from the 1955 figure of 15,575,000 persons to 26,650,000 persons by 1980.

Hours of work, both in agriculture and in industry, are expected to continue to decline. Average hours per week per man in agriculture are predicted to fall from 55.3 in 1955 to 43.75 in 1980, and, in business, to fall from 41.3 in 1955 to 34.3 in 1980.

Output per man-hour has been increasing more rapidly in agriculture than in any other part of the economy, although it is still considerably lower than in most other sectors. The Commission predicts that productivity in agriculture will continue to increase over the next 15 years at a high rate, and, over the succeeding ten years, at a substantial but somewhat slower rate.

The farm labor force, which has been declining in relative as well as absolute terms, will drop from 15 to 7 per cent of the total labor force between 1955 and 1980.

The directions of changes in farming in the next 25 years are expected to follow the broad trends evident in recent experience. Land will continue to go out of agriculture in eastern Canada and farms will continue to increase in size in western Canada, particularly during the next ten years. In the latter half of the 25-year period agriculture is expected to become more intensified with the result that there will be decreases in the rate at which labor leaves the industry and in the rate at which the number of farms declines.

Export demand for the products of agriculture are not expected to increase materially in the next 25 years, nor are imports of agricultural products likely to increase to the point where they will seriously inconvenience domestic producers.

The dynamic factors in the agricultural picture will be further technological improvements, the growth of the domestic market, and a continuation of the trend toward increasing consumption of meats. These factors, taken together, are expected by the Commission to result in substantially more hog raising, particularly on the prairies, and in more cattle raising in all parts of Canada.

The domestic demand for dairy products, vegetables and certain other products will increase with the increase in population, but at a slower rate than the demand for meats.

PROPOSALS. Irrigation. The Commission suggests that substantial irrigation projects, while desirable from the standpoint of local areas, could be

harmful rather than helpful to farmers in the aggregate. It is feared that for the immediate future they would have a depressing effect on farm prices and incomes. The Commission does state, however, that at some time in the future, extensive irrigation schemes, settlement plans, and programs designed to expand production may be desirable.

Prairie Farm Assistance Act. The Commission suggests there might be merit in imposing some limit upon the number of years in which payment could be made under this Act, to people who persist in farming lands which have a high record of crop failures over a term of years. If this were done, the Commission suggests that assistance should be offered to those people who would be willing to re-establish themselves elsewhere.

Land Use. Problems resulting from low farm incomes are, the Commission states, particularly acute in the Atlantic Provinces. It suggests that, if the people and governments of these provinces are interested in co-operating, the federal government should establish a plan to assist in working out a better system of land use, including the provision of credit facilities to finance the consolidation of holdings and the provision of assistance, financial and otherwise, to people who may wish to be relocated and re-established in other industries. The Commission also suggests that the federal government should co-operate in the same way with any other provinces where similar problems exist.

Farm Credit. The Commission believes that farm credit agencies could appropriately extend the period of repayment up to 40 years for long-term loans, and to five or six years for intermediate loans.

Farm Price Supports. The Commission favors a separate board to administer an effective price support program; one which would become skilled in anticipating the occurrence of emergency conditions and in determining the effects of particular prices on production and on incomes. The Commission believes that the determination of support prices on the advice of a full-time board, to relieve distress conditions due to economic fluctuations, would be preferable to the application of more or less automatic formulae.

Canadian Wheat Board. The Commission favors continuation of the Canadian Wheat Board to handle the marketing of wheat and coarse grains. It states that the surplus of wheat in Canada at present does not seem to have arisen out of the procedures used to market the crop, but has resulted primarily from weather conditions. The problem, as the Commission sees it, appears to be that of considering adjustments and modifications of the present system.

The Commission suggests that persistent surpluses may indicate the necessity of bringing about some reduction in acreage sown to wheat, although it does not believe this should be necessary on a permanent

basis over a long period. It suggests, in particular, that consideration be given to a method of relating the initial price paid to individual farmers, to a quantity determined by the storage situation and the prospects for disposal. Under this method, when surplus production is taxing storage facilities to the limit, farmers would know in advance that if there were another bumper crop in western Canada, only a stated part of it would be delivered to the Board in the crop year. The balance would have to be stored on the farm or used for feed. If such a situation continued, farmers would tend to reduce their wheat acreage to some extent, and thus achieve a better balance between supply and demand.

Specifically, the Commission suggests that in periods of substantial surpluses, the Board should announce, well before seeding time, the quantity of wheat for which it will guarantee a minimum price in the coming crop year. The Board would not make any commitment in advance, either as to the price it would pay, or the time when it would purchase any quantities of wheat over and above the initial guaranteed quantity. The quantity of wheat which the Board would guarantee to accept should be broken down into guaranteed delivery quotas for each farmer who holds a wheat delivery permit. To begin with, the delivery quota for the individual farmer might be based wholly or in part on his previous production records.

The Board should not be required to accept the total quota of any farmer

at the exact date when the farmer wished to deliver it. But a rate of payment could be made similar to that of recent years which would be based on intermediate or partial deliveries of the total acreage quota. In the event that the Board was unable to move certain grades over the period in which the quota was deliverable, the farmer would be paid for wheat which he would be required to deliver at some later date. Farmers who produced more wheat in one year than their guaranteed delivery quotas called for would be entitled to carry forward the surplus on their farms and deliver it against their quotas in the following year. Under this proposal the responsibility for the eventual marketing of all wheat produced would still rest with the Wheat Board.

Freight Rates. The Commission believes that a method will need to be found to provide the railways with additional revenue required to meet their rising costs of doing business. It suggests, as a short-run solution, that the government provide, in the form of a subsidy, such amounts as may be necessary to help meet rising costs and maintain the efficiency of the railway system. In the long-run the Commission suggests that the rates on low-value bulk commodities, and particularly the statutory rates on grain, could be increased. It believes that improvement in the world grain situation and the growth of livestock production in the prairie region may create conditions under which greater flexibility in grain rates could be introduced. ✓

In the Dust Storm



This one was in Iowa, last year. Left: Deau J. R. Weir, University of Manitoba, trying for a photograph, while behind him The Country Guide editor tried for another. Bottom, right: A heavy trash cover of corustalks kept the air free of dust. The other pictures will bring none too pleasant recollections to prairie readers.

[Guide photos]



Assiniboia C.U. Just Grows and Grows



Glenn Gyman (right), manager of the Assiniboia Credit Union, greets a customer. Offering full checking facilities, the Union now has 2,000 members.

THE reported shortage of farm cash in Saskatchewan hasn't hurt the flourishing Assiniboia Credit Union. In fact, Glenn Gyman, manager, says that it has helped business, because people save more when money is scarce, realizing that they must set something aside for an uncertain future. The really significant thing, however, is that there is money available for savings.

This credit union has come a long way in 16 years. It owns a fine building in Assiniboia, which was opened in 1953, and its assets a few months ago amounted to \$1,078,000, an all-time high. The figure for 1954 was \$780,000.

The Assiniboia Credit Union started in 1940 with about 15 members, and assets of around \$100. Dr. Henn, a minister of the United Church, was the first president, and he was succeeded by Jack Scott, a local farmer. Another farmer, J. H. Broeder, is president now. Fred Jones, an insurance and real estate agent, was part-time manager until 1954, when Glenn Gyman was appointed full-time manager. It has built up steadily to a membership of 2,000, and with a full checking system, has competed successfully with local banks. In May alone, the assets increased by \$70,000.

FARMERS are active supporters of the credit union, but there is quite a large volume of business from the merchants of Assiniboia, too. Mr. Gyman believes that running a fully fledged banking business in their own building has helped to give confidence and to attract members.

With Tom Ross, secretary (one of the first directors, too), there are eight other directors. These are usually elected on the basis of five from the town and four from the country, in order to provide a quorum, even when the farmers are unable to get to town.

This credit union is proud of its record. It has always been able to pay three per cent on savings, and it was able to set aside 20 per cent for reserve in December, 1955. Like most other credit unions, it insures all loans,

and carries life insurance on savings up to the age of 70.

Lending activities have been tightened in recent years on the bigger amounts, as in Canada generally. But business, says Glenn, is pretty good. It keeps him and his staff of three, fully occupied. V

New Durum Wheat Licensed

RAMSEY, a new variety of Amber durum wheat developed by the North Dakota Agricultural Experiment Station, has been licensed for sale in Canada. Ramsey matures about the same time as Mindum and Stewart, but it is shorter, has slightly stronger straw and has appreciable resistance to race 15B of stem rust. It is equal to Mindum (the standard) in macaroni making quality and has out-yielded both Mindum and Stewart in the rust area of western Canada. Farmers are warned that it must not be thought of as a highly rust-resistant variety, but it does have better rust resistance than either Mindum or Stewart.

Seed stocks of Ramsey are now being distributed to farmers in southern Manitoba and southern Saskatchewan by the Canada Department of Agriculture. The area for distribution is defined as "Manitoba, south of Township 12, and Saskatchewan, south of the Qu'Appelle Valley and its extension into the Buffalo Pound Water Course east of the Third Meridian." The Department's total supply of 4,500 bushels will be distributed in two-bushel to four-bushel lots as commercial seed. To obtain seed, farmers must complete an order form available from the Officer-in-Charge, Canada Department of Agriculture, Cereal Seeds, 309 Hargrave Street, Winnipeg 2, Man.

It is expected that further supplies of Ramsey will be available from the United States through normal commercial seed channels and directly from U.S. growers. Farmers who purchase imported seed should make sure that it is tagged and verified as to variety. V

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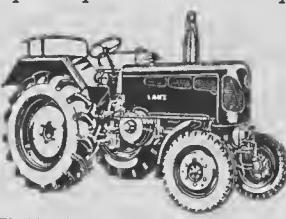
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The C.F.A. Comes of Age

Continued from page 9

failed to benefit from his authoritative analysis of the international and national settings in which agriculture must function today. Even to condense the background which he sketched in so expertly is impracticable here. At best, we can only quote his concluding remarks:

"The rapid growth in population and real incomes will create a rising domestic market for all products, faster for some than for others. The problem before agriculture is to pursue policies which are designed to take the best possible advantage of this prospect, as well as to take advantage of the export outlets that will exist. It means flexibility, so that there may be expansion in the output of the products for which there is an expanding market. It means the avoidance of straightjackets on the industry, and the kind of price-fixing devices which create the wrong incentives and end up by making the farmer the ward of the government. It means further increases in efficiency and probably further reduction in the number of marginal farms which are either too small or insufficiently productive. It means marketing arrangements which yield the best long-run returns to the farmers, and help to smooth out fluctuations in a manner which is in accord with the realities of the market."

"In all this, the farmer will need to have available an adequate supply of credit on reasonable terms; he will need to be assisted with research, sound development and conservation measures, better transportation, and continuous improvements in handling, processing, and storage facilities. The achievement of these purposes will require wise and far-sighted leadership. Agriculture is much too important an industry to be made the object of social experiments which are conceived in defiance of economic realities. In our expanding and dynamic economy, agriculture will always be the most basic industry, and its welfare will always be of vital concern to the nation."

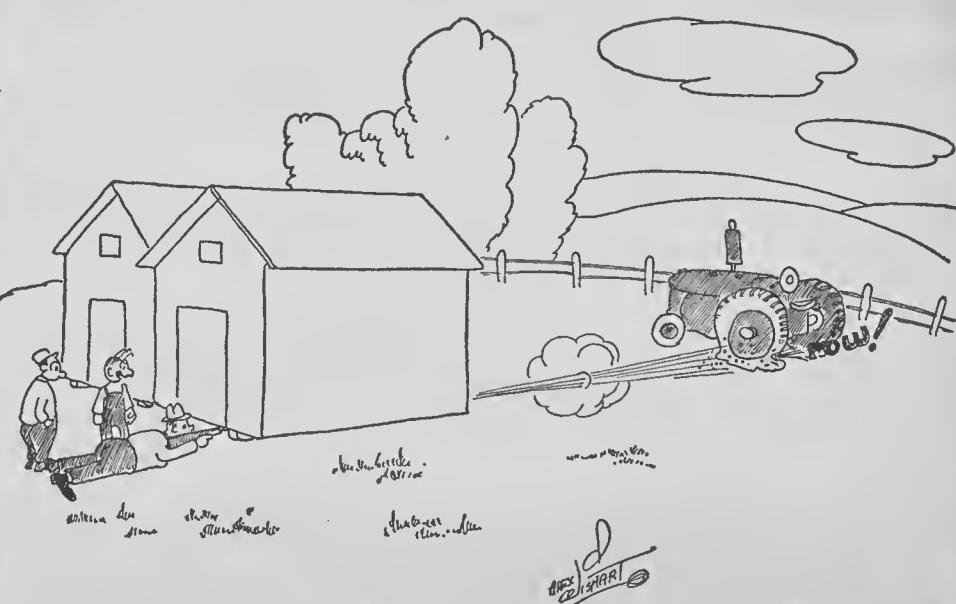
An annual meeting of the Canadian Federation of Agriculture is divisible into three kinds of activity, namely, the public sessions, the commodity sessions and the Board sessions. The

public sessions are intended to provide an opportunity for farmers living within reasonable distance of the place of meeting, to attend and have some part in the discussion of resolutions, as well as to hear the president's address and that of the Minister of Agriculture. Because these sessions are nearly always heavily weighted with people from a fairly limited area, any votes on resolutions are not binding on the Federation. They are, however, given careful consideration by the Board when they are reviewed. The commodity sessions are attended by those who have special interests in such subjects as livestock and poultry, and it is the custom for resolutions dealing with these subjects to be discussed by the interested delegates, before they come up for final treatment by the directors. It sometimes happens that the interested delegates cannot agree on some contentious matter, and in such instances it is the custom of the Board to wait for more complete agreement before dealing with the matter.

IT is customary, and has been for some years, for western farm organizations to meet immediately prior to the C.F.A. Annual Meeting, for a Western Agricultural Conference, where all resolutions originating in the western provinces are considered before being passed on to the C.F.A. Similar procedure holds for eastern organizations as well, which meet in a separate Eastern Conference. Likewise, it has been the practice in recent years for the Dairy Farmers of Canada to meet the week previous to the C.F.A. meeting, and there to draw up a policy statement for the dairy industry. This statement then comes before the C.F.A. for endorsement, or otherwise.

Resolutions always appear in large numbers; often far too many to be effectively considered and dealt with. None, however, go unregarded, though it is not unknown for some to be referred to the Executive.

Price supports, as usual, were prominent in the minds of delegates, and this year resolutions came forward on the question of "deficiency payments." Such payments to producers would go beyond the level of official price supports under the Agricultural Prices Support Act; and in the minds of some delegates, they should be sufficient to bring the actual price received up to the level of the cost of production. In Britain, this method is used as a



"I guess Pop shot that ol' rat under the granary this time!"

means of guaranteeing to farmers the average market price of a commodity. The Agricultural Prices Support Board has applied this principle in a few isolated instances, and it was not very clear that the sponsors of this type of payment all had the same thing in mind. The net result of a considerable amount of discussion was that the Board decided to set up a special committee to give careful study to the practicability of deficiency payments and to report later, rather than create a sharp division of opinion within the Federation at the present time. Basically, such division as existed tended to lie between those who seemed inclined to turn more readily to governments to relieve the financial difficulties of farmers, and those who believe that this problem requires much more varied treatment than price guarantees alone. Meanwhile, the government is not likely to rush into deficiency payments with any undue haste, and the committee will have ample time to pursue its study of the question.

Marketing Boards were, of course, prominent this year, as in recent years. The legality of certain procedures by marketing boards is now under consideration by the Supreme Court of Canada. A court judgment was released during the week of the C.F.A. meeting, but no clarification of its meaning was available on short notice. It seems probable that present marketing board legislation in the several provinces may require amendment in some cases and also that federal legislation may also require amendment before these acts will serve agriculture

from coast to coast in adequate fashion.

At the livestock commodity session, Charles McInnis, President of the Ontario Hog Producers' Marketing Board, was a major speaker. He dealt at considerable length with the special problem facing his organization, of getting Ontario hogs delivered at public stockyards, before they are sold. The following paragraph from his address pretty well reflects the character of his argument against the direct shipment of hogs to packing plants:

"When the farmers of Canada and those in industry can for any reason no longer have their products delivered to where they can be sold to the best advantage, we no longer have freedom of sale, freedom of trade, or freedom of market. The law of supply and demand cannot operate. The free enterprise system cannot function. Our freedom is gone."

TH E C.F.A. endorsed a resolution favoring the establishment of a producers' national egg marketing board and calling for the promotion and formation of an egg marketing plan in those provinces wishing to participate. A national egg marketing plan committee is to be set up by the C.F.A.

Another resolution called upon provincial federations to continue to develop educational programs which will acquaint producers with the advantages of marketing boards, so that the respective provinces may be prepared to take such action as may be considered in the best interests of their producers.

The perennial questions of a revision of hog grades, and some revision of beef grades so that the commercial or medium grade could receive greater recognition as a quality product, were again before the meeting, and action was again deferred. Once again it seems to have been a question of too many cooks spoiling the broth.

The policy statement of the Dairy Farmers of Canada came forward to the Federation in the form of ten resolutions. These were broadly endorsed, but one or two were set aside for further examination, especially those dealing with tariff changes on imported dairy products.

One resolution called for an investigation of the practicability of adding a "tracer" to all edible oils and fats other than milk fats, which would facilitate quick and accurate detection of such oils and fats in food products.

It is regretted that space does not permit a discussion of the fate of the many resolutions dealt with, which covered 24 foolscap pages. Similarly, the wide variety of activity carried on through the national office of the C.F.A. would add substantially to appreciation of the C.F.A. by farmers, if it could be adequately outlined here, as it was in the address of the president and the report of the secretary. All this points up the fact that, financially, the C.F.A. is not in a position to give adequate publicity to its many activities among its own members. The responsibility of doing this, therefore, lies heavily on the shoulders of each of the provincial and member parties. V

From Dairy To Beef Cattle



[Guide photo]

JAMES BAILLIE has turned his back on the old dairy cow-creamery-hog program, to develop a straight beef cattle enterprise on his farm at Cape John, Nova Scotia, and now runs up to 80 head of cattle on his 160 acres.

He sees a good future for beef cattle in Nova Scotia. Noting the intention of the provincial department of agriculture to encourage greater emphasis on grassland farming, coupled with more and better beef cattle, he has turned to purebred Aberdeen-Angus. He now has a breeding herd of about 30 cows, and has been using good herd sires from well-known Ontario herds. His hope is that when people see the job that the black, polled cattle do in making beef, many farmers will turn to them. V



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How to Mix Concrete

Well prepared concrete will be harder and last longer than if you neglect the rules

by L. J. SMITH



For good concrete, dry mix correct amounts of ingredients until color is uniform, then add four gallons of water per sack of cement. Turn six times or more.

EVERY farmer does concrete work. Sometimes it is only a small job, but the improvement often runs into quite an investment.

We have good reason to use concrete on the farm. First, because it is durable. If the work is properly done, it will last forever. We like it because it is sanitary and can readily be cleaned and disinfected. It also is one of the few real fireproof materials.

Concrete is very strong and takes a lot of heavy usage. It requires few tools, and one does not have to be a so-called "expert" to do a good durable job.

Too often, concrete is thought of as a mixture of sand, gravel or crushed stone, and cement, with water to get a workable mass which can be more readily gotten into place. Really, the cement and water constitute "a paste" which hardens chemically and binds or glues the aggregates into a solid artificial stone which is stronger than most building materials. A well known expert on concrete recently said "there probably is no one factor which has so great effect on the strength of concrete (which means wearability), as



Mixture should trowel well without excess water. Add more after it sets.

the water content." It now is known that 50 per cent of the strength of concrete may easily be lost because of too sloppy a mixture. Yet, one pays for the materials which, if properly used, will result in that desired maximum, high-quality building material.

Many strength tests show that where four gallons of clean water is used per sack of cement, the given mix has an average compressive strength of 5,000 pounds per square inch 28 days after the concrete has been put in place. Where the same proportions of sand, gravel and cement were used, but in six gallons of water per sack, the strength at the end of four weeks was only 3,000 pounds per square inch. It is a little harder to get the four-gallon mix into place on some jobs, but the resultant higher quality of the concrete—and at no extra cost—makes the extra effort decidedly worth while.

Another important item little understood, is the need of thorough mixing, both before and after adding the water to the aggregates. One first mixes dry to get the powdery cement in contact with all the surfaces of the particles of sand and gravel. Then, the water is added, measuring by a pail of known volume, and the real mixing begins.

IF possible, use a power mixer. In commercial jobs, one often sees the mixing done in 15 to 20 seconds per batch. That is not long enough. The time should be at least two minutes, which will make the concrete from 20 to 35 per cent stronger than when the shorter mix is used. Really, the strength can be increased by mixing up to ten minutes, which seldom is done. With hand-mixing, one seldom gets a concrete that is 50 per cent of its maximum possible strength. So, be sure to mix dry until you have a uniform color; then add water and turn over the concrete on the mixing platform six, or better still, eight times, two men working together.

Cement, when mixed with water, forms a glue. Using too much water

just dilutes the glue. Thorough mixing gets the glue into all the surfaces and crevices of the aggregate, resulting in a more dense, and therefore stronger and more durable, concrete.

The best time to do concrete is during warm weather. Concrete cured at just above freezing will, at the end of 28 days, be about half as strong as if the temperature had been 70 degrees. The warmer the weather the faster the chemical hardening process. So, if concrete just has to be done in cold weather, be sure to cover it up nights and during frosty weather. Also, protect the surface from loss of moisture by evaporation, either from the sun's rays, or from warm air passing over the surface.

After the initial set, add water to the surface in order to prevent loss of needed moisture, thus insuring continuous hardening action. If the new concrete is allowed to dry out, the chemical hardening stops. If plenty of

water is added later, the chemical process will not pick up and go on as it would before the hardening action had been neglected.

Under favorable conditions, concrete will continue to become stronger up beyond six months after placing, though the increase in strength is smaller each succeeding week.

In conclusion, users of concrete can easily increase the strength and therefore the "wearability" of a given job from one-third up to one-half, and at no extra cost, simply by proper mixing, by not using too much water, and by giving the fresh concrete every possible chance to continue the hardening process. Whether one gets only a fair quality, or an excellent piece of concrete, depends largely on how carefully the work is done. One pays for a good piece of concrete in any case, but it is up to the farmer as to whether he gets the best for his money or not. V

Rough Living Suits His Herefords

This Manitoba breeder saves labor and money, but still produces prize-winning cattle



These cattle like to rough it for E. H. Batho, Oak Lake, Man. They also earn top prizes at the Brandon Sale, and are keen competitors on the show circuit.

A COMBINATION of wet, sandy soil, wild grass, and cattle kept outside, even through a really hard winter, may not sound like the ideal way to produce prize-winning Herefords. Nevertheless, E. H. Batho is proving that it can be done on his farm at Oak Lake, Manitoba. He believes that with good breeding, the hardy Hereford responds well to fairly rough treatment, and that although a good herd depends on good breeding stock, it need not be necessarily the most expensive available.

He won the grand championship for sale bulls and futurity at the Brandon Winter Fair last year, where his bull was also reserve supreme champion of all breeds, and made top price in the sale. One of his entries was second in the junior yearling class previously at Toronto, and his bulls, steers and heifers have become familiar in the prize lists of the fair circuit.

Mr. Batho, who was a grain farmer in the Minnedosa district for a number of years, first became interested in cattle when one of his daughters joined the local calf club. His three

daughters and one son have all been successful calf club members since then. He bought his first Hereford cow in 1941, and now has a herd of about 130, all of which, with the exception of the herd bull and five cows, are of his own breeding.

He moved to Oak Lake about six years ago, buying some cheap land which was wet, sandy and unsuitable for grain growing. It was producing wild hay and pasture, which was not of the top quality. He has used this hay, and the Herefords appear to have thrived on it, but he is gradually breaking up the land and seeding it to alfalfa, brome, crested wheatgrass and clover. While many were short of forage last winter, he had a surplus and sold it, although he does not produce hay for that purpose. He also grows grain north of Minnedosa.

He keeps his cattle outside all the year round. Last winter, for example, about 70 cows and heifers wintered in a bluff and were fed hay only. This hay was left out in the fields, not stacked, and was hauled straight to the cattle, which broke it out of the

bales themselves. Not only have they come through in excellent condition, but they produced about 40 calves, and only two of these were lost.

Meanwhile, the remainder of the herd, including some of the young ones, and the nine he is showing at the fairs this season, were wintering

No economic quality can survive the working of biological inequality.—Herbert Clark Hoover.

in the open near the farm home, and were fed some grain.

It has been claimed that a Hereford will head straight into the bitterest wind to get to its feed, while others will tend to turn away and wait for the weather to improve. Mr. Batho is showing that Herefords can take it, but more important is the fact that his methods keep down costs and still get results. He reckons that his way is

cheaper, needing less labor and a minimum of buildings, as compared with more conventional systems. He has to feed more hay, than if his cattle were wintered in a barn, but he still saves on the deal. As for the results, two of his steers, which were sold off grass after wintering out, made the top price of the day at a Brandon sale.

He and his son, Ronnie, handle the whole operation themselves. Ronnie is away most of the summer on the fair circuit, which is practically a necessity if their reputation for good feeding stock is to be kept to the fore. He has also spent the last two winters away from home taking a diploma course in agriculture. Their labor-saving methods therefore pay in more ways than economy alone. It also gives them great satisfaction to see their cattle compete successfully at shows, after being treated a lot more roughly than most of the others there. V

Where Winter Is Harvest Time

Three farm cellars produce six crops during winter months, from roots grown outdoors in the summer

WINTER is harvest time in the topsy-turvy business of rhubarb farming, as carried on by Doug Curtis, at Truro, Nova Scotia. In fact, all winter long, men are busy cutting, packing and shipping the rhubarb crop—when most cash croppers are taking it easy and laying plans for the next summer's program.

Winter harvest means an end to heat and drought and rain problems, of course. But with this crop it means working in the dark, as well. Doug Curtis grows his rhubarb in three darkened, and furnace-heated cellars on the Curtis farm.

Here is how the program runs. The same rhubarb root stock has been maintained on the farm for decades, a hardy plant with no insect pests or diseases. Each year, over an acre of rhubarb plants are dug and divided into enough plants to make four or five acres. These plants are set out and grow for two years in the field, developing sturdy roots. The second fall,

these clumps are dug and left to freeze on the ground surface.

Then the frozen roots are carried into the cellar and laid out on the floor, to be thawed and warmed to growing temperature, by a coal furnace. The roots immediately begin sending out rhubarb stocks, topped by very tiny, pale leaves. About three cuttings can be made from each group of roots before they are exhausted. Since the roots can be started at different times, harvest continuity is assured.

Having three cellars, one set of roots when exhausted, can be replaced with another. Each cellar thus provides two crops of about three cuttings each, during the winter.

Labor is the big problem with such a program for there is a lot of hand-work to handling and picking this crop. Mr. Curtis ties rhubarb growing in with a 15-cow Holstein herd. He sells the rhubarb in Sydney and Halifax, the major N.S. markets. V



Guide photo

Three cellars, each growing two rhubarb crops, of three cuttings each, give Doug Curtis plenty of work—and income—during the Maritime winter period.



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VOL. LXXVI WINNIPEG, FEBRUARY, 1957 No. 2

Parity Income

DURING the years when farm prices have tended to fall and farm costs to rise, there is general agreement that agriculture has been at some disadvantage as compared with the remainder of the economy. This disadvantage has been made more evident in the prairie provinces, by reason of the accumulated surplus of grains, particularly wheat. Since World War I there has been an increasing world-wide tendency for governments to intervene freely in national economies with a view to satisfying the demand from various segments of individual countries for a balanced progress. In recent years, this demand on the part of agriculture has found frequent use in Canada for the term *parity income*, by which is meant very broadly, income for agriculture which is equal to that secured in non-agricultural industries.

Unfortunately, agriculture is not yet clear enough as to what it means by parity income. Two separate generalizations might be used to illustrate this fact, both of which appeared at the meeting in Winnipeg of the Canadian Federation of Agriculture. One concept is that the farmer should be guaranteed his cost of production; otherwise he must go out of business. The other is that by the use of price supports, or deficiency payments, or by some combination of these and other devices, the Federal Government should produce parity income and present it to the farmer.

Exactly what is meant by parity income is seldom, if ever, defined in anything like precise terms, by those who use it. Moreover, the difficulty with both of these interpretations is the difficulty of determining how two different generalizations on the same subject, each having the same objective, can be harmonized to the point where organized agriculture can unite in saying that parity income means precisely this, or that. If cost of production should be the final concept of parity income, then the example given last month to the Western Agricultural Conference, of two wheat producers,—one of whom had costs amounting to 52 cents per bushel, and the other, costs amounting to \$10.74 per bushel,—must be taken into consideration. These are, of course, extreme examples, but it is unlikely that the costs of any two producers out of any hundred would be exactly the same. Similarly, it is unlikely that the costs of production in any two wheat-producing communities in the three prairie provinces would be precisely alike. If this is true, then whose costs is the Federal Government expected to meet, in the proposed guarantees of costs of production to 200,000 prairie wheat producers. If average costs are what are meant, then all of those—and there are many—whose costs are above average would be ill-treated according to this cost-of-production concept.

The other approach presumably means that support prices for farm products should be high enough that agriculture, regardless of market conditions, would receive average net incomes corresponding to the average of returns by non-farmers. This immediately gives rise to the question: what group of non-farmers? Successful farming today is a business, and the farmer is the manager of the business. Should the returns to agriculture be equal to the average of the returns to all managers of non-farm businesses? Or, because the farm operator in nearly all cases works constantly at physical labor, should his returns equal the average of all members of labor unions? What is the criterion of equality?

We are not setting up straw men for the fun of knocking them down. What we are suggesting, in all earnestness, is the necessity on the part of organized agriculture of achieving the maximum degree of unity in official circles, and the maximum

general understanding among organization members, of what is meant by this very attractive, but misleading term, parity income. Unless clearly defined, the term is relatively meaningless; or, at best, meaningful only in such broad, blurred terms as to confuse understanding of the problem it represents. V

Echo of the Strike

THE recent strike of firemen on the Canadian Pacific Railway occurred as a result of a difference of opinion on a matter of fact, following conciliation proceedings, the result of which was unsatisfactory to the Union. This difference of opinion on a matter of fact, brought about a work stoppage involving some 70,000 workers and a loss of revenue to both parties of perhaps \$20 million, to say nothing of inconvenience and loss to the public. The question was as to whether it is safe for the railway to dispense with firemen in the cabs of diesel engines doing certain kinds of work. As a result of this strike, a fact-finding body headed by a senior judge will determine the fact.

That the strike was ended by the intervention of the Prime Minister is a good thing. That the fact about which the dispute evolved is to be clearly established by an independent body is also a good thing. What is not good, is that the laws of this country apparently permit the use of the strike weapon as a means of deciding a fact of this particular kind. Moreover, it seems strange indeed that with a Board of Transport Commissioners, who have been given authority to compel 16 million Canadians to pay increased freight rates, the same board is not trusted to solve a relatively simple problem such as the matter presently in dispute.

Surely this question was anticipated long in advance of the threatened strike, and logically, the machinery was available for determining the fact. Surely, too, the Board of Transport Commissioners was the proper body to determine it in advance, or at least early enough to avoid the occurrence of a costly strike on this one point. We expect a certain amount of ineptitude on the part of governments, if only because both governments and governed are human. Nevertheless, there should be some minimum of good judgment imposed even on those whom we ourselves have elected, if only because it was they who claimed a superior ability to govern. V

Farm Economic Prospects

CANADA'S Royal Commission on Economic Prospects will report to the Government sometime before the close of this year. Meanwhile, the Commission deemed it advisable to publish an interim report last month, a preview, as it were, of the conclusions which it will present in more extended form in a final report. Also to be published, in addition to the report itself, are some thirty-odd separate studies of selected aspects of the Canadian economy.

The interim report of the Commission was no sooner published, than some of its suggestions and proposals were sharply criticized. Some of the material which created the most vigorous discussion had to do with farm surpluses, especially wheat. A brief resume of these appears elsewhere in this issue. One or two features of the wheat proposal no doubt surprised most people. One jolt handed to the Canadian Wheat Board, which incidentally was not criticized on the soundness of its operations, was that it should estimate, in advance of seeding, the amount of wheat which it expected to dispose of in the following crop year, and on this basis, establish a quota for each producer based on a study of individual production records over previous years. This suggestion, when fully spelled out, has other implications, more especially for the Federal Government, which will hardly accord more than a doubtful welcome to the suggestion that the initial payment should be made on farm-stored quota grain, undeliverable because of elevator congestion.

The Commission is on less controversial, but equally interesting ground, when it takes a look

at agriculture 25 years from now. Using 1951 as a base period, it expects farm size to increase by ten per cent by 1965, and by 16 per cent by 1980. The number of farms in Canada, however, will decrease a further nine per cent by 1965 and 13 per cent by 1980. Further mechanization, it believes, will reduce the labor required per farm by 16 per cent by 1965. Most interesting, perhaps, is the estimate that the volume of livestock production per farm will be more than one-third larger in 1965 than in 1951, and will have more than doubled by 1980. This increase will be due to a much larger domestic market, which will result from an increase in population from 16 million at the present time, to more than 26 million in 1980.

Land will continue to be taken out of agriculture in eastern Canada, and prairie farms will continue to enlarge, the Commission believes. Rather surprisingly, it seems to us, the Commission takes a fairly neutral, if not a kindly view of producer marketing boards, believing that "the further growth of the co-operative movement and compulsory marketing boards based on the will of the majority seems to be highly probable."

We have only one general comment about the interim report of the Commission, as it relates to agriculture. This preview of the future of agriculture in this country is both welcome and useful. Its suggestions and proposals with regard to the handling of the grain surplus are, we think, badly timed. The atmosphere of a general election that will soon envelope us is characteristically more likely to heat than to clarify. It is almost certain that many of those who will discuss these matters in the coming months will be more interested in votes than in logic and reason. V

More Immigrants

IT is hopeful news that the Federal Government appears to be planning a more aggressive effort to secure immigrants to Canada. Unless it is merely a sample of pre-election propaganda, this seems to be the meaning of news despatches which have been sent out from Ottawa recently.

There is no doubt about the shortage of labor. This shortage is felt with special severity on Canadian farms, where, in recent years at least, it has been impossible for farmers to compete with urban industries on even terms. Until after World War II this fact never seemed to be of special importance, because of the amount of redundant labor on many farms. The war, however, drew large numbers of people from Canadian farms into the armed services and into industry. Since the war, the rapidity of farm mechanization has also masked the basic difference between agriculture and urban industry in this respect. Since 1951, however, the boom in other segments of the economy, coupled with the cost-price squeeze which has affected agriculture, primarily because of rising farm costs, has made the problem very acute.

From this point of view, organized labor seems to have managed this aspect of the Canadian economy very successfully, and to its distinct advantage. The solution is a larger labor force in this country. The last few years have indicated very clearly something of what Canada's future may be, when we get into our proper stride as a country with immense natural resources that are comparatively valueless unless used. Merely to extract them and ship them out of the country is not enough. To use them for manufacture and processing in this country requires capital and labor. Today the crucial factor is undoubtedly labor. Costs have risen so substantially,—to no small degree because of a limited labor supply,—that the extractive and manufacturing industries have been led to bid wildly for such labor as is available.

Most Canadians will agree that unrestricted and non-selective immigration is undesirable, but under present circumstances a too-selective and too-restricted immigration policy is equally undesirable. Credit restrictions, sound as they may be and necessary under the circumstances, are not the only key to a balanced economy. An inadequate labor force, producing a too rapid rise in costs, and therefore in prices, can be an equally critical factor. V

Strawberries Most Profitable



[Guide photo
Strawberries, potatoes, steers and 20
dairy cows mix well on this N.B. farm.

ASK mixed farmer Walter Knight of Jemseg, New Brunswick, in the lower St. John River Valley, about strawberries, and he'll tell you "They are the best paying crop on the farm today."

On 135 cleared acres, he has 1½ acres of strawberries, the same acreage of early potatoes, milks about 20 cows, feeds off some hogs and 20 two-year-old steers each year.

Now he is equipped for irrigation to further boost the value of the crop. He cut costs by mounting his pump on an old tractor chassis, connecting it to the drive shaft so he has portable equipment to produce rain, no matter how dry the season. He even laid irrigation pipe right under the new highway built through his farm, to carry water to fields across the road from the river.

Premier is his early variety. Sparkle comes along later, and he sells to the fresh fruit market. But here he tips his hat to Capital Co-operative Ltd., in Fredericton, which has taken the surplus off the market for freezing, thus stabilizing prices.

Mr. Knight plants his berries after a crop of potatoes, which clean out the weeds. The potatoes get one ton of fertilizer to the acre; and in the fall, the field is given a heavy dressing of barnyard manure.

All blossoms are pinched off the strawberry plants the first year. The main crop is harvested the second year, and finally, an early picking is taken the third year before the berries are plowed down. Berries won't come back to the same field for at least another five years, to be sure soil diseases are completely gone.

Even though berries are his best crop, this hard-working farmer has high hopes that the new army camp at Gagetown might provide a fluid milk market for him. He has a mechanical gutter cleaner in his stable, and good grass land for the dairy herd. In fact, much of his hay land consists of river flats, which, he remarks slyly, gets a good coating of Carleton county topsoil during spring floods. He figures that the potential fluid milk business might be more profitable than his cream and hog enterprise as it now operates. V

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Are you well-supplied with Magic? Check, before your next baking!



*Everyone tastes the difference
in a dessert you make yourself*

MAGIC MOCHA PUDDING

(Self-sauced with Chocolate)

3 ounces (3 squares) unsweetened
chocolate

1½ tbsps. corn starch

2 cups fine granulated sugar

2½ cups water

1½ cups once-sifted cake flour

2½ tsps. Magic Baking Powder

½ tsp. salt

2 tsps. powdered instant coffee

6 tbsps. butter or margarine

1 egg, well-beaten

½ cup milk

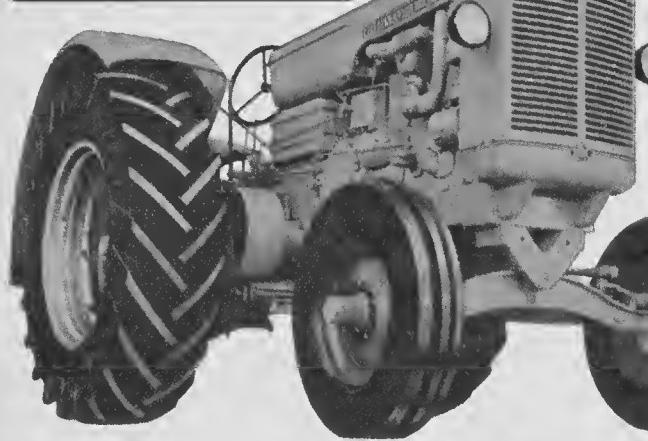
½ tsp. vanilla

Melt the chocolate in the top of double boiler. Combine the corn starch and 1½ cups of the sugar and stir into melted chocolate. Stir in water. Cook over low direct heat, stirring constantly, until sauce comes to the boil; cover and keep hot over boiling water until needed.

Grease a 6-cup casserole. Preheat oven to 350° (moderate).

Sift flour, Magic Baking Powder, salt and instant coffee together three times. Cream butter or margarine; gradually blend in remaining ½ cup sugar. Add well-beaten egg, part at a time, beating well after each addition. Measure milk and add vanilla. Add flour mixture to creamed mixture about a third at a time, alternating with two additions of milk and vanilla and combining lightly after each addition. Turn batter into prepared casserole. Pour 2 cups of hot chocolate sauce over batter. (Keep remaining sauce over hot water to serve with pudding.) Bake pudding in preheated oven about 50 minutes. Pass remaining hot sauce.

Magic costs less than 1¢ per average baking



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